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IRRADIATION AS A MEANS OF TREATING CANCER*

BY HENRY K. PANCOAST, M.D.†

IN the treatment of no other disease are there so many widely diverse methods directed toward attempted cures as in cancer, and yet each legitimate one possesses a very definite use. This diversity of therapeutic measures is due primarily to the very nature of the condition on the one hand, and to our lack of knowledge of a definite etiological factor by which we might be directed toward a specific preventive or destructive agent. In its nature, cancer is always first a local cellular proliferative disease of an invasive character which requires for its cure, in the light of our present knowledge, some agent which is capable of removing every cellular vestige of the growth. Later on, it is prone to become a more or less general localized but invasive affection which calls for quite different therapeutic procedures.

The various legitimate measures which may be directed toward the treatment of cancer at the present time and worthy of general recognition are the following:

1. Surgery.
2. Irradiation by means of roentgen rays or radium or both.
3. Electrothermic methods, or a more refined, better controlled and more exact means of employing heat.
4. Cauterization,—a more crude method of applying heat.
5. Caustics for local destructive effects.
6. The internal administration of some of the heavy metals in colloidal state, notably lead and gold.

In addition to these destructive methods, one should always bear in mind the necessity, when occasion arises, of carrying out certain secondary measures, as the following:

1. General medical care, which is too often neglected.
2. Various preventive measures, such as the avoidance of constant irritants and the removal of certain recognized precancerous lesions.
3. Local cleanliness.
4. Operative procedures to induce functional rest, as gastrostomy in cancer of the mouth, pharynx and esophagus and colostomy in cancer of the rectum.
5. Neurosurgical procedures for the relief of pain.

In view of our lack of knowledge of a specific etiological factor in the growth of cancer we may be employing very mediocre methods at the present time. We certainly hope that this may be true if a better method is to be discovered. However, should the true cause of the disease ever be discovered we may find ourselves no better off therapeutically than we are now, with the single exception of the possibility of additional refinements in technic and the earlier detection of primary lesions. While there is no definite basis for the belief, I am often discouraged by the likelihood of this being found to be the truth.

There was a time, and not long passed, when the advocates of the different methods of treatment exhibited a spirit of rivalry and criticism, and occasionally, almost contempt. Fortunately such personal feelings are now fast disappearing, and all of us meet on a common ground with the one idea of doing all we can to relieve the afflicted and lessen the increasing incidence and mortality of cancer. We radiologists have only our own means of combatting the disease. Our agents are supplied to us for a definite purpose as a duty imposed upon us until something more efficacious is discovered. We do not in the least belittle the valuable and necessary work of the surgeon, and do not hesitate to ask his assistance when it is needed. Moreover, we welcome the collection of reliable statistics which may tell us whether our efforts are in vain or not. This medical world of ours is too busy a place to waste valuable time on measures that are unavailing or simply act as placeboes.

In some instances all of the various methods of treatment are carried out by a single individual. In others they are administered by the various members of a group or clinic as in the so-called Cancer Institutes. This is a most admirable practice which possesses many advantages. In such combinations we usually find the most open-minded and conservative individuals working together in perfect unison for the best interests of the patients. Certainly every state

*Presented before the Suffolk District Medical Society, April 24, 1929.

†Pancoast—Professor of Roentgenology, University of Pennsylvania. For record and address of author see "This Week's Issue," page 139.

and even every metropolitan district should have the advantage of such a group. In the great majority of instances at the present time all of the therapeutic procedures must be carried out by at least two individuals,—the surgeon and the radiologist. The latter usually has charge of roentgen ray and radium irradiation and the electrothermic methods, although the surgeon, at times, may take care of the radium applications and electro-desiccation. Intravenous colloidal injections may be made by one of these individuals or a third person. The internist must be called upon when occasion arises.

There is still some difference of opinion as to the best method or methods of dealing with some cancers. This usually arises from the fact that two methods in question are about equally efficacious. Even general statistics may not quell the dispute because all surgeons and all radiologists are not equally proficient, and probably never will be. While irradiation is the theme of this presentation, let it be understood that the radiologist in question realizes the part he has to play in the administration of the appropriate therapeutic agents, but at the same time he is fully cognizant of the great importance of surgery and is always willing to coöperate with the surgeon in every way. At the same time, however, he is still open to conviction that surgery is always the method of choice over irradiation or electrothermic methods alone in some instances. This is but human nature based upon an essential confidence one must have in the work he does.

No one in these days, denies the importance in general of irradiation methods. Differences in opinion as to its efficacy are engendered by a lack of experience or over-enthusiasm on the part of the radiologist, with possibly a trace of jealousy here and there, which fortunately, is fast disappearing. There are those who exaggerate the limitations of irradiation, and unfortunately, though mostly in the past, almost to the point of an obsession. There may be a few over-enthusiastic radiologists whose knowledge of the subjects unfits them for any honest opinion. There are ultra-enthusiasts among the most experienced and capable, but this is not a grievous fault. We are probably perfectly safe in stating that the majority of us fully realize the limitations of our methods and agents and practice with what we have for the good it will do, always hoping that we may improve or that something better will be discovered.

Any very radical improvements in the technic of application of irradiation cannot be promised for the future, or, at least, none that will add materially to the percentage of so-called cures in the advanced cases. The only modifications that seem likely are variations in wave lengths and in filtration. Possibly the biologist, pathologist and biochemist may render us valuable assistance.

A general discussion of the application of irradiation to all forms of cancer and in all locations is not possible in this presentation. It has seemed best to stress the applications in certain localities where there may be some difference of opinion as to the special advantages of irradiation and electrodesiccation and where special care in technic is required. These regions are the skin in general, the lower lip, the mouth and the breast. There are certain localities in which there are very definite limitations to the use of these agents according to general experience, as the larynx, esophagus, stomach and portions of the intestinal tract

SUPERFICIAL MALIGNANCY

In the treatment of cancer and other malignancies of the skin, several factors are to be considered in the selection of the appropriate therapeutic measure.

1. Cosmetic Effect. Irradiation usually gives the best cosmetic results in small lesions when it can be used to the exclusion of other methods.

2. Minimum loss of tissue. Surgery and electrothermic methods are not selective and must go wide of a growth to be successful, and sacrifice normal tissue unnecessarily where its preservation is essential. Irradiation is the most conservative of tissue. This is very important in such locations as the eyelids.

3. Depth of the lesion. (a) In small superficial primary lesions of the skin we have always felt that radium gave better results than roentgen ray applications. In the use of radium superficially the irradiation is delivered practically only to the superficial tissues involved and very little reaches the deeper structures. The therapeutic agent is largely beta particles which are not deeply penetrating. The effect of roentgen rays is deeper in larger quantities and it depends upon the detachment of secondary electrons and the output cannot be so nicely controlled. (b) Where lesions are deep, more highly filtered radium, roentgen rays, electrothermic methods or surgery or all combined may be necessary. (c) In deeper lesions one must be on guard against superficial healing without destruction of all of the deeper parts of the growth. This often happens in the temporal region and the deep infiltration may work its way under the temporal fascia and extend for some distance before it is detected. Cancer hesitates to infiltrate and perforate cartilage. For this reason it may work its way for a considerable distance under the skin of the ear or it may infiltrate under the ala of the nose.

4. Danger to other structures. The eye must always be protected when growths on or near the lids are being treated. Radium is easier to control under such circumstances.

5. One should try to eradicate all of the lesions at one time, if possible, because repeated irradiation after a time may favor more rapid recurrence.

6. In cancer attacking areas from which metastasis readily develops, the primary lesion should be treated by appropriate methods and the lymphatic drainage avenues and the lymph node regions should also be treated whether apparently involved or not. It is not uncommon to see metastatic cervical lymph node enlargements occur many years after cure of primary lip lesions.

SPECIAL REGIONS

1. *The Eyelid* These are usually involved by basal cell growths and respond readily. As the conservation of tissue is important, radium is the agent of choice, assisted occasionally by electrodesiccation in larger growths. We do not regard the latter alone as a safe means of treatment. When using radium the eye must be carefully protected against any great amount of exposure and this is easily done. Larger growths around the outer or the inner canthus tend to infiltrate inward into the orbital cavity as well as to attack the eyeball. It has been our experience that when the eyeball is involved by a canthus lesion which has been present for any great length of time, the eye must be removed in order to reach all of the growth successfully and save the patient. Such growths, require, at least, very heavy treatment which in itself may injure the eye. Those at the inner canthus may not only enter the orbit, but tend to infiltrate into the ethmoid cells at a comparatively early period and their deeper portions then become difficult or impossible to reach.

2. *The Face* Most facial carcinomas are basal cell in type and do not metastasize until very late. Most of the comparatively early cases get well and stay well if properly treated. Radium is the agent of choice, assisted by electrodesiccation if deep.

3. *The Ear* As previously stated, the extensive cartilaginous structure of the ear favors the spread of cancer under the skin until, in older lesions, the extent may be far greater than one realizes. Conservation of tissue is important for cosmetic purposes, and yet radium has its disadvantages. It answers very well for very superficial lesions not requiring heavy dosage, but larger doses may cause a very painful perichondritis and the area may not heal. In deeper lesions, we use electrodesiccation or follow radium with this agent. One should not hesitate to sacrifice all or a part of an ear when large lesions are present. Cancerous growths just in the front of the ear require great care because they tend to infiltrate under the cartilage and often metastasize to the preauricular lymph node. In connection with the ear, attention should be called to the necessity of examining the auditory canal in all cases in which metastatic neck glands are present and no primary lesion is evident.

4. *The Nose* Skin cancers of the nose are extracartilaginous and have a similar tendency to spread. They are often unusually widespread, especially when infiltrating under the alae, and extensive electrodesiccation may be necessary. Too often have we seen ultra-conservative procedures end disastrously. Fortunately the plastic surgeon can now perform marvels in the way of making new noses.

THE LOWER LIP

Although this is primarily a superficial face lesion it requires separate discussion because of its tendency to early and dangerous metastasis and because it is so often of a highly malignant character. The more we see of lip cancer the less we depend upon pathological grading as a basis of treatment and prognosis. We are inclined to treat all alike as the most malignant form. Moreover, if large, more than one grade of cancer may be present in the same lesion. We have treated a large number of lip cancers and we have confidence in our non-surgical measures, but no cancer of the lip should be treated solely by a radiologist unless his treatment is carried out in a most thorough manner. For a number of years we have employed the following technic:

A. *The primary lesion.* The primary lesion and the area a short distance beyond ulceration or induration receive a heavy dose of moderately filtered radium irradiation. If rather superficial, this may suffice, but if the lesion exhibits distinct induration, denoting considerable depth, the entire area is removed within one to three days after the radium application by electrodesiccation. Our experience leads us to believe that this practice gives better results than surgical excision and subsequent postoperative irradiation, especially in larger growths. In the smaller growths, tissue is certainly conserved. Unless the primary lesion is thoroughly and adequately treated, surgery is preferable, however.

B. *The lymphatic drainage areas* from the primary lesion to the margin of the jaw subsequently receive a full erythema dose of roentgen rays, to be repeated once or twice at appropriate intervals.

C. *The lymphatic gland areas* in the neck receive a similar treatment whether glands are palpable or not. We have seen glandular metastasis occur as long as eight years after treatment of the primary lesion alone. In addition to roentgen irradiation of the neck, a small radium applicator is used under the chin and jaw, giving from one half to three fourths of an erythema dose, heavily filtered. If isolated glands are present or appear later, and do not respond to irradiation, we resort to surgery before they grow too large or become fixed, although this is seldom necessary.

D. Subsequently the case is carefully watched for recurrences, once a month during the first year, and every two to three months during the second, every three months during

the third year and then every six months up to the end of the fifth to the sixth year. In addition, the patient is told about the appearances that would denote local recurrences and the possibilities of gland metastasis are explained, and he is instructed to come back at once if either condition is discovered in the intervals or after the fifth or sixth year discharge.

THE MOUTH

This is one of the greatest fields for irradiation, with or without electrodesiccation or surgery. There is still much need of instruction of the laity and even the medical and dental professions in regard to certain definite predisposing causes of mouth cancer, including well recognized precancerous conditions. These are of sufficient importance to enumerate them:

(1) Bad teeth and poorly fitting dental plates and even pyorrhea. Almost every mouth cancer patient will be found to have bad teeth. The irritation of sharp teeth and irritating plates is comparable to that of the feet in the production of corns. Nature, however, has provided that the irritation of the foot results in the piling up of epidermis, but in the case of the mouth, such long continued cell proliferation is likely to end in disaster.

(2) Syphilitic scars are potent forerunners of many mouth cancers.

(3) Tobacco must be credited with the causation of many cancers in various parts of the mouth, either directly or through the production of leukoplakia.

(4) Leukoplakia is a dangerous precancerous condition, especially when it has passed the stage of the smooth white patch. It is especially likely to be serious along the line of the "bite" or around the molars. Its appearance is a warning to stop the use of tobacco, correct the denture, especially along the bite line and to remove the irritation caused by badly fitting plates.

(5) Hypertrophied mucosa is a frequent condition that is often mistaken for and even treated for cancer. The lesion is characterized by soft folds of mucous membrane, limited usually to the alveolar process but often extending over the buccal mucosa and is caused by improperly fitting plates. We do not know its exact relation to cancer, but it should be allowed to subside, which it usually does, by having the patient leave out the plates, until it disappears.

Mouth cancers are divided into several groups, depending upon location and methods of treatment. They are usually classified as follows:

1. Mucous membrane of the cheeks, alveoli, anterior pillars and the palate.
2. The tongue, with a further classification into growths on the tip, sides, anterior pillar junction and dorsum.
3. Floor of the mouth.
4. Tonsillar region.
5. Oropharynx.

Cancers of the mucous membrane are difficult to eradicate surgically, but are admirably adapted to direct radium irradiation. While we are not wedded to the newer idea of treating mouth cases indiscriminately by heavy doses of highly filtered gamma irradiation, except in the advanced cases, we do feel that this method has made us more conservative in hesitating to mutilate hopeless or nearly hopeless cases. One should always remember that a cheek completely infiltrated by cancer often better serves the comfort of the patient than its radical removal without a fair chance of recovery. In the less advanced cases we still continue to use electrodesiccation in addition to local radium irradiation. The latter treatment is carried out by surface applicators or dental compound, and a marked reaction must be produced. Desiccation is not practiced unless all of the growth cannot be reached by the radium application. Radon tubes or radium needles may be necessary in addition in some cases. The treatment is not complete unless external irradiation is applied outside and over the neck. One should not forget that small palatal lesions may give rise to early dangerous cervical metastasis.

Leukoplakia that does not respond to preventive measures may be treated by either radium or light electrodesiccation.

Cancers of the Tongue are always serious because they are prone to produce early lymphatic permeation and glandular metastasis. Primary lesions occurring on the tip, side or pillar junction, if small, can be treated by radium locally and by electrodesiccation or radium implantation later if necessary. This is always followed by deep roentgen ray therapy outside. Extensive lesions had best be treated conservatively by deep roentgen rays or heavily filtered gamma irradiation only. Heavily filtered radium locally is advisable in addition.

Cancers in the floor of the mouth, if not extensive, require local radium applications with deep roentgen or gamma ray irradiation outside the face and over the neck. We still often resort to electrodesiccation in some of the smaller lesions. Extensive growths had best be treated by only deep external irradiation and heavily filtered surface radium inside.

Cancer of the tonsil very frequently gives much better results than lesions of the same extent elsewhere in the mouth. We have long continued to employ local radium surface applications, with or without radon implants, and supplemented by deep therapy outside.

Pharynx lesions usually can be treated only by deep external irradiation.

All mouth cases when treated by direct irradiation or desiccation and the extensive growths given only palliative external irradiation require great care as to cleanliness. The feeding of the patient is often a problem which must be turned over to the internist, and sometimes also to the surgeon.

MAXILLARY SINUSES

The initial treatment of such cases is external deep roentgen ray or heavily filtered gamma ray applications. We are still strongly inclined to the Crosby Greene method of follow-up treatment provided the anterior wall is not involved, or only to a slight extent. It gives one good access for subsequent local applications and recurrences can be easily detected. The neck must also be treated, of course. One should not forget that many cancers of the upper alveolar process have their origins in the maxillary sinus and many that are primary in the mouth quickly invade the antrum.

THE LARYNX

The larynx is a structure which is so anatomically constructed as to preclude the possibility of successful irradiation treatment. It is composed of a thin soft tissue covering over cartilage as in the case of the ear. Cancerous growths are prone to infiltrate for some distance over the cartilage without perforation or extensive ulceration. They are apt to spread under the cords beyond vision. Metastases occur early in posterior growths. Perichondritis is an inevitable and very painful result of heavy irradiation and the usual nature of the growth requires a caustic dose which almost invariably produces it. Applicators for direct radium irradiation are difficult to place and more difficult to hold in position. To sum up in a few words, the treatment of cancer of the larynx by irradiation alone is an unsuccessful and painful procedure except in palliative cases receiving only external applications. The suffering caused in one five year cure case we would not care to inflict upon another individual. Fortunately laryngofissure for removal of early growths and laryngectomy for more advanced intrinsic lesions, followed by post operative external irradiation, has often succeeded where our methods alone would have failed. Lesions that have become extrinsic add to the complication of treatment if not too extensive, but may have to be classed as palliative in respect to the procedures that may be employed.

THE ESOPHAGUS

Carcinoma of the esophagus is a hopeless condition under any form of treatment, largely because of the free lymphatic drainage which gives it a tendency to spread readily. The best we can do is to use radium in the visible cancerous stricture and external deep therapy. This may keep the tube patulous for a while longer.

PRIMARY LUNG CANCER

Everyone now recognizes the fact that there has been a progressive increase in the incidence of primary lung cancer during the past few years, and no entirely satisfactory cause has been proven. It is very variable in its reaction to irradiation. Only a very few cases have been successfully treated, and the great majority grow progressively worse despite all the external deep roentgen ray therapy that can be applied. In one case Dr. Jackson recently implanted gold radon tubes into two accessible bronchial nodules with very satisfactory results up to the present time. This supplemented external irradiation. This method is applicable to only a few selected cases, however.

THE STOMACH

Lack of any satisfactory results and the depression of the patients by the treatment over this region have led us to stop treating cancer of the stomach.

THE LARGE BOWEL

The efficacy of irradiation in the treatment of cancer of the colon is very doubtful, beyond a slight palliative effect.

THE RECTUM

Surgical excision is the method of choice in all operable cases of cancer of the rectum. In inoperable or borderline cases, external irradiation alone will not suffice, and radium must be used locally in addition by some method. Conservative estimates place the 5 year cures by irradiation at about 10 per cent. or a little more. A colostomy is always necessary for adequate treatment.

THE BLADDER

The anatomical relations of the bladder are not favorable for the successful treatment of cancer by any means. Occasional good results in cases not too far advanced make it worth while to attempt whatever procedures may seem indicated. For the smaller growths, access is imperative in order to apply radium and often diathermy properly. In addition, external irradiation must supplement these agents. In rare instances we have seen excellent results from external irradiation alone.

THE PROSTATE

Nothing can be promised in the way of a cure in this condition, and even palliative efforts are of doubtful value.

THE PENIS

Amputation, with or without preliminary local radium applications and followed by deep roentgen ray treatment to the inguinal regions seems to be the procedure of choice at the present time, and the results are fairly good.

THE BREAST

Cancer of the breast seems to be the most important aspect of the disease for discussion at the present time. Unfortunately most of the statistics now available are of little value or are unreliable for general use, especially those in

connection with irradiation treatment. Undoubtedly there is a great difference in results among radiologists because of the great variety of methods employed. It seems certain that the results of a few are exceptionally good, but it is equally certain that they are not generally duplicated. It would seem wise to adopt some plan whereby reliable comparative statistics among radiologists could be compiled and those showing the best results could be analyzed with a view of standardizing methods of treatment. Certainly we are able to find which surgical procedures yield the best results. The recent compilation of statistics by Dr. Greenough's committee is a step in the right direction, but unfortunately it is such a short step as to be almost without value at the present time.

In order to discuss methods of treatment it is necessary to group cases or procedures according to the most appropriate therapeutic measures. For this purpose they may be classified as follows:

Operable cases
Anteoperative treatment
Postoperative treatment
Palliative irradiation
Palliative Surgery
Recurrent cases

Operable cases. There is still a difference of opinion among surgeons as to just what constitutes an operable case, and this will continue until there is certain knowledge as to what can be expected from radiological procedures generally and not in the hands of a few. We are perfectly safe in stating that any case without palpable evidence of metastasis is an operable case and surgery is then the procedure of choice. We are perfectly well satisfied to have the case with palpable axillary glands and no other evidences of metastasis classed as "borderline". Certainly the presence of further metastases makes the operation solely a palliative one. A certain number of operable cases must be treated by irradiation because the patient refuses operation or because of age or some contraindicating condition elsewhere.

Irradiation in such cases must be carried out by very exact methods analogous to those employed in connection with cancer of the lower lip. The primary focus,—the breast, must receive an adequate dosage, and the axilla, neck, infraclavicular region, chest and opposite breast and axilla must be thoroughly treated also. Implantations of radon seeds or radium needles into the breast growth may be necessary, but we do not like to do this because we have seen some very unhappy results follow. If the implantations, as supplemental to the other treatment, fail, rapid spread of the growth may occur.

Anteoperative Treatment. This is a very popular procedure at the present time and theoretically, at least, it has many points in its favor, which do not always work out practically, however. We have tried it many times but we have not been convinced that it has any definite advantages.

Postoperative Treatment. Based on theoretical grounds, this should be the most important use for irradiation. A surgeon is seldom absolutely certain that he has removed every vestige of a growth, and this application of irradiation is intended to prevent recurrences from small foci that may be left and to deal with possible metastases. To accomplish its purpose the treatment must be most thorough and should be carried out according to the same general principles as apply to primary operable cases when they have to be treated. The great difficulty lies in not knowing just what we are treating if there should be any part of the growth remaining or any small metastases present. Should either be present each focus should receive a maximum dose to be effectual. We have no way of determining the efficacy of such treatment except through very widely collected statistics. Even then we should consider various combinations such as good surgery alone, mediocre surgery alone, good surgery and good irradiation, good surgery and poorly applied irradiation and the reverse, and both mediocre surgery and irradiation. The collection of such statistics would seem to be a hopeless task. In the light of our present knowledge, postoperative irradiation should never encourage incomplete operations. On the other hand, successful and dependable postoperative treatment should have as one of its greatest advantages the possibility of operating on cases that are not strictly operable with the safety of reliance upon the treatment to take care of what is left. The attitude of everyone, if based upon statistics, must still remain one of doubt. The author would certainly insist upon postoperative irradiation if a member of his own family were the unfortunate victim of cancer of the breast.

Palliative irradiation for advanced inoperable and recurrent cases is the one field for treatment that has been definitely proven and is generally recognized to be worth while. Naturally the treatment can be carried out with a very definite purpose in view.

Palliative Surgery includes two groups of cases,—the primary case which may not be regarded as strictly operable and the inoperable case in which irradiation has not been entirely successful in destroying the breast tumor, but the growth has become smaller and can be easily removed. In the latter instance the patient might be regarded as having had an ideal form of anteoperative treatment. Such cases are encountered more frequently in the aged, and the palliative removal of the breast and subsequent treatment of any recurrences that may arise may keep the disease in check during the remaining years of the patient's life. Such a surgical

procedure is certainly well worth while in many instances.

Recurrent cases. This group includes those cases in which recurrences are small, and not the almost hopeless palliative cases. The recurrences may follow unsuccessful or only partly successful postoperative treatment or they may be seen in patients who have not received such care. If seen for the first time, the usual procedure is to give what amounts to postoperative treatment and then to deal with each recurrent lesion individually in addition. This is another very important group for irradiation.

THE UTERUS

The statistical studies of the Cancer Committee of the American College of Surgeons render a discussion of this subject almost unnecessary. However, there is a fanciful scheme which the author wishes could be worked out in some practical manner. There are several radiologists or radiological gynecologists who seem to be getting much better results than the average by irradiation. If only their technic could be carefully studied and made universal, results in general should be much better.

MEDICAL HISTORY

LITHOTOMIES PERFORMED BY DR. GARDINER, OF BOSTON, 1738 AND 1741

By Robert Francis Seybolt*

IN the unpublished manuscript diary of the Rev. Nehemiah Hobart, of Hingham and Cohasset (1697-1740), is a brief entry, of April 14, 1739, which may find a place in the files of those who are collecting materials for a history of medicine in Boston. It records an operation for calculus vesicae performed by Dr. Gardiner, and an autopsy by Dr. Stockbridge. The item follows:

Colonel Amos Turner Esqr Anno Aetatis 68. he had been languishing many years and the last two years of his life exercised with extreme pain. Stone in the bladder was cut by Dr Gardner of Boston on March 27, 1738 and one stone taken out. Opened after his death by Dr Stockbridge and four stones taken out of his bladder one two inches long weighed two ounces. one more larger than that taken out in his life time. the other two were of a smaller size.

The technique employed by Dr. Gardiner is indicated in a "Medical Society" item published in *The Boston Weekly News Letter*, Nov. 5-13, 1741:

A Medical Society in Boston, New-England, with no quackish View, as is the manner of some; but for the Comfort and Benefit of the unhappy and miserable Sufferers by the excruciating Pain occasioned by a Stone in the Bladder, do Publish the following Case.

IN *Boston*, Octo. 8, 1741, *Joseph Baker* Aet. 6, was cut for the Stone in the Bladder, according to Mr. *Cheselden's* late Improvement of the *lateral* Way, by Mr. *Gardner* of *Boston* (who had some Part of his Education in the Hospitals and Infirmaries of *London* and *Paris*) in Presence of the *Medical Society* and others without reserve.

This Boy by his Complaints seems to have had the Rudiments of this Stone from his Birth, and by degrees the Paroxyms of Pain became so violent, that Death or the Operation were unavoidable. This Stone was extracted in the *lateral* Method without Distraction or Dilaceration of the Parts, which too frequently kill the Patient in a few Days or Weeks; or if the Patient escapes with his Life, the Urine continues to issue involuntarily by the Wound, during an uncomfortable Life. Several such miserable Instances we have had in this Province for want of Skill and Discretion in the Operator.

This Stone when extracted, was of a lenticular Form, somewhat elongated, imitating the converging Part of the Bladder, its surface *instar Lapidis arenosis*, but more hard and compact, the Circumference 4.75 Inches; its centeral Thickness 8.5 Inch; the longest Diameter 1.5 Inch; the shortest Diameter 1.25 Inch.

The Dressings were soft easy and simple, with a Milk Diet to mitigate the scalding of the Water in the Wound: The 4th Day the Urine began to trickle in the natural Way; the 11th Day it passed the natural Way in a full strong Stream; the 15th Day no more Urine by the Wound; and makes Water only 3 or 4 times in 24 Hours; after the 23d Day, no more Dressing, the Wound being well cicatrized and the Boy at Play about the House.

Thus in about 3 Weeks a compleat and easy Cure for the Stone in the Bladder, was effected in the *lateral* Way.

The Dr. Gardner mentioned in these records was Silvester Gardiner (1707-1786), whose life has been briefly chronicled in *American Medical Biographies* (ed. by Kelly, H. A., and Burrage, W. L. Balto., 1920).

*Seybolt—Professor of the History of Education, University of Illinois. For record and address of author see "This Week's Issue," page 139.

NEW ENGLAND SURGICAL SOCIETY

THE SURGICAL CLINIC IN THE DISPENSARY*

BY WILLIS E. HARTSHORN, M.D.†

TWO factors are absolutely essential in the conduct of Dispensary Teaching Clinics: 1st, the patients must receive the best possible care; 2nd, to accomplish this result, the student must acquire the most thorough training and instruction possible. We concentrate every effort on teaching him how to take histories and make thorough physical examinations and try to instill into his mind from the very first the vital importance of this both to him and to the public. Thus the advantage of a teaching clinic to the student and to the patient. The better the instruction given the student the better the treatment which the patient receives. The entire success of the clinic is dependent on the two factors above mentioned. Supplementing this must be an adequate nursing staff and well arranged clinic rooms.

In order that the patients' interests be most carefully conserved it is vitally essential that the student receive the most careful instruction BEFORE he is sent to the clinic. It is for this reason that students of the second clinical or senior year are assigned to the Dispensary. Previous to this assignment they serve during the first clinical or junior year as clerks in the wards of the Hospital and so become efficient in the best methods of taking histories and making physical examinations under the most favorable auspices. In the Hospital these histories are frequently checked by the Attending Surgeons or members of the house staff and in this manner the student learns accuracy and realizes that there is no more important habit to acquire in the life of the medical man than careful history taking and the making of thorough physical examinations.

The student of the second clinical or senior year therefore comes to the Surgical Clinic better trained than when dispensary assignments were given to men of the first clinical year who had no experience in the technique of the historian and physical examiner. Here we concentrate on an effort to put to a practical test this training. These factors are also extremely important on account of their economical considerations. The Dispensary is the source of contact with many patients needing hospital care. We have the unit system. If the patient when admitted to the hospital is thoroughly examined, x-rays and laboratory tests already made and history carefully written it means just so many hospital days saved and to the individual of limited means, the average ward patient, this is a vital matter. It also saves the hospital a large amount of expense yearly in the treatment of indigent patients who would otherwise have to remain in the wards several days while these things were being done. The time of the hospital staff is also conserved. Above every other consideration it teaches the students the importance of thorough physical examinations and instills into their minds the fact that every patient must have this, or their work will be considered slipshod and incomplete. We try to emphasize the fact that they must develop a history sense and a physical examination sense just as an aseptic sense is developed. They should no more think of letting a patient leave the dispensary without a thorough physical examination than they would think of violating one of the many important rules of surgical technique. In addition we try to fix in their minds the fact that their success as physicians depends on this one thing more than on any other. That achievement here marks the difference between the man who in later years will be in demand as a consultant or teacher and the mediocre physician with the careless methods too frequently seen. The closest possible affiliation between the Hospital and the Dispensary is most essential to accomplish these ends.

Another very important and helpful factor is the dropping of the old recitation system where the students were taught by assigning so many pages a day in a textbook and its replacement by the present method of instruction simulating the English type where the student comes up before the examining board, at the end of two years, dependent only on his own initiative as to acquiring knowledge through courses of lectures, dissections, reading and seminars. A new era has replaced the old and the old type of spoon fed student has been replaced by a more self reliant group, who as seniors have won out through their own efforts, and no one welcomes and appreciates this changed attitude more than the instructors in charge of dispensary teaching. As an average the men of the 2nd clinical or senior year come to us better trained and with more originality of thought and conception than ever before.

The following instructions are given each student of the 2nd clinical year assigned to the Surgical Clinic:

*Read at the Annual Meeting of the New England Surgical Society, Providence, R. I., September 28, 1929.

†Hartshorn—Clinical Professor of Surgery, Yale University. For record and address of author see "This Week's Issue," page 139.

NEW HAVEN DISPENSARY

Surgical Clinic 2nd Clinical Year

Students are expected to start work in the clinic promptly at 9:15 A. M. Emergency cases are to be treated at this time.

All return cases are to be seen by appointment only. The first appointment should be made for 9:00 A. M. Allow 15 minutes to secure history from the history room. The time for return visits should be stated on the appointment blank and should be given each patient. The name of the patient should be written on the clinic appointment blank opposite the time assigned. Appointments should not be made after 11:00 A. M. except on special clinic days. In case a patient with an appointment is not on time, begin work on a new case. It is very important that new cases be cared for promptly.

Each new case must have a complete physical examination unless this has previously been made in the hospital or in some other clinic. This is to include:

Blood pressure
Wassermann
Urine examination
Cultures in all infections
Complete blood count where needed

to establish a diagnosis. The entire work up must be completed before the consultant is called.

Senior students should consider that their final stand in the Department of Surgery depends on the character of their work in the Dispensary. Essential points are:

(a) Punctuality. Appointments must be kept as in private practice.
(b) Careful histories and physical examinations.
(c) Laboratory work.
(d) A comprehensive knowledge of each case before calling for consultation.
(e) A demonstration of ability to make a successful practitioner as evidenced by their attitude toward their cases in the surgical clinic.

Use the laboratory constantly. The department has tried to develop one suitable for your own private office. Note its contents. Apply practically what you have learned about laboratory methods.

The tendency is to lack thoroughness in physical examinations. Acquire the habit of making careful physical examinations of each patient. This is difficult. It will require effort on the part of the student. Treat each patient with courtesy. You will treat your private cases exactly as you do your Dispensary patients.

Tetanus antitoxin *MUST* be given every patient who presents a break of the skin resulting from an accident.

Bandages

2nd Clinical Year

Each student in the 2nd Clinical Year is required to be able to apply the following bandages before finishing his work in the Surgical Clinic. Numbers correspond to those in Foote's Minor Surgery.

HEAD:

1. Occipito Frontal
3. Double Oblique Circular
4. Crossed Circular
5. Knotted Bandage
7. Recurrent Single Roller
8. Recurrent Double Roller
9. Partial Recurrent
10. Fig. of Eight of one Eye
11. Fig. of Eight of both Eyes
12. Four tailed Bandage
13. Barton's

NECK, AXILLA AND CHEST:

17. Posterior Fig. Eight Head and Neck
18. Anterior Fig. Eight Head and Neck
19. Fig. Eight Neck and Axilla
20. Fig. Eight—Both Axillae
24. Anterior Fig. Eight—Neck and Chest
25. Anterior Fig. Eight—Chest
28. Spica Breast
29. Spica—both Breasts
30. Velpeau

UPPER EXTREMITY:

34. Ascending Spica of Shoulder
35. Descending Spica of Shoulder
37. Concentric Fig. 8 at Elbow
38. Eccentric Fig. 8 at Elbow
39. Spiral Reverse of Forearm
40. Figure 8 of Forearm
41. Figure 8 of Hand
43. Spica of Thumb
44. Spiral Reverse of Finger
46. Gauntlet
47. Recurrent of Finger

LOWER EXTREMITY:

48. Ascending Spica of Groin
49. Descending Spica of Groin
50. Ascending Spica of Both Groins
55. Concentric Fig. 8 of Knee
56. Eccentric Fig. 8 of Knee
57. Figure of 8 of Leg
58. Spiral Reverse of Leg
60. Figure of 8 of Ankle
61. Figure of 8 of Foot and Leg
62. Figure of 8 of Heel

MISCELLANEOUS BANDAGES:

68. Recurrent Bandage of Stump
Arm and Chest Bandage
Application of slings

ADHESIVE PLASTER:

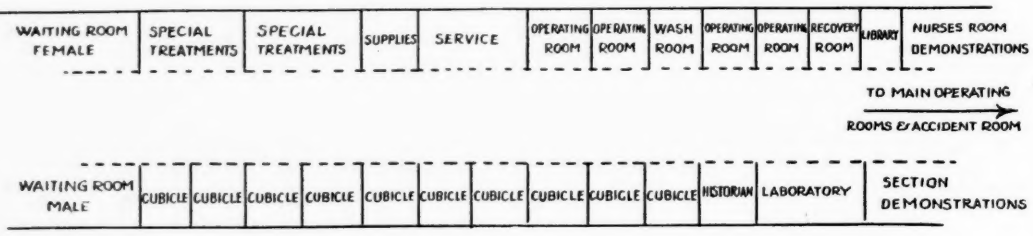
Strapping Knee, Wrist and Ankle
Strapping Chest for Fracture of Ribs

Instruction in the application of splints in fracture cases is vested in the Orthopedic department, to whom all fracture cases are referred.

The Dispensary should be located in the central area of the plant so that it can have the benefit of all Hospital facilities with Medical and Surgical wards in close approximation. The accident room of the Hospital should be included in this affiliation so that the students may have as complete training as possible in all minor surgical and emergency proceedings. The assignments should be made so that full time service is given the department. This should extend over the entire twenty-four hours and be so arranged that each student covers a certain amount of night emergency work. With sections of seven or more students this can easily be planned. The advantage of this close association with the Hospital itself is that at any time consultations may be obtained from members of the House Staff assigned to the Dispensary and Accident room service. It will also be possible to send patients to the regular operating rooms for minor procedures of a semi-serious nature requiring gas but not necessarily demanding admittance to the Hospital itself. This will serve to still further broaden the Student's experience.

The matter of the arrangement of the rooms in the clinic is of vital importance, see Chart 1. Every effort should be made to secure privacy for the patient. To this end the waiting rooms should be placed so that their occupants cannot be observed from the general admitting room. Within the Clinic itself ample space should be provided for sterilizing and supply rooms, operating rooms for clean and infected cases, demonstration and conference rooms. A series of small cubicles should be provided for examinations and treatments. A properly run clinic will need about ten of these. When a patient is assigned to a student he will be taken into one of these rooms exactly as if he was consulting his private physician and be under his especial care until discharged. Here the history can be taken free from the unrest associated with the activities of the clinic. A careful physical examination can be made without interruption. Each cubicle will contain a desk for taking the histories, chairs, a foot rest, an examining table and a table provided with dressings and instruments.

THE SURGICAL CLINIC AT THE DISPENSARY
Suggested Arrangement of Rooms



TEN CUBICLES EACH TO CONTAIN,
1. DESK. 2. WHITE IRON CHAIRS (2)
3. FOOT REST. 4. DRESSING TABLE 18"X24"
5. EXAMINING TABLE 6'X21"
SIZE OF CUBICLES 9'X10'

CHART NO. 1

In addition, two rooms should be provided for the special treatment of varicose veins of the lower extremities, leg ulcers and other chronic conditions.

As many of these treatments such as, the application of gelatin bandages to leg ulcers and the injection of varicose veins, or skin grafting require considerable time and care these patients come to the clinic on the days assigned to them. Special supervision by the attending surgeon should be given them and it is wise to provide as an interne one who is interested in this type of work and is willing to keep careful statistics.

It might not be out of place at this point to give a brief résumé of the methods employed in the treatment of some of these chronic conditions. They always present a problem on any clinic. (1) Leg ulcers. The main point in the treatments is of course to fix definitely the cause of the condition. Here of first importance is the history and physical examination. This usually establishes the diagnosis. If syphilitic, diabetic, or nephritic appropriate constitutional treatment is outlined in the Medical Clinic. Students are taught that no dressings must be applied until diagnosis is established. They must make a careful study of the condition before even calling consultation. They are frequently told that if they call immediate consultations in their cases in private practice, without attempting to solve their own problems, they will be unsuccessful. These chronic cases offer a fruitful field for teaching. We have found one of the most helpful treatments in leg ulcers is the gelatin bandage and the method we use is that employed at the Massachusetts General Hospital. The solution is made up of Zinc Oxide 200 gm., Gelatin 200 gm., Glycerine 200 cc., Water 700 cc. Dissolve gelatin in warm water and then add glycerine and zinc oxide. Warm the mixture and apply it to leg with brush or other applicator after dressing the ulcer as desired. Cover with bandage. Paint bandage with the mixture. Apply another bandage and a final application of the gelatin and zinc oxide. Allow to harden for twenty minutes. This makes a firm comfortable pressure bandage and in most cases can be worn a week without changing. It is surprising how most leg ulcers respond to this treatment.

(2) Another problem which is very practical is the present treatment of varicose veins. A brief note might not be out of place regarding the status of the injection treatment with us. We have, as have most clinics, used various methods and solutions. Recently we have adopted the method suggested by Kern and Angle in their article on "The Chemical Obliteration of Varicose Veins" in the *Journal of the American Medical Association* for August 24, 1929. This seems a very rational plan and their report is quite complete. An outline of their history sheet is appended. A careful record of each treatment is most important.

I. History

a. Duration.
b. Etiology.
c. Progress. Questions about phlebitis.
d. Symptoms.
e. Ulcer.
Duration.
Size.
Symptoms.
Treatment.

II. Physical Examination

A. Size and distribution of veins.
1. Mark on chart and describe.
2. State if any phlebitis, phleboliths or thromboses present.
3. Examine for oedema.
4. Trendelenberg test.
5. Arterial pulsation.

B. Ulcer.
1. Location.
2 Size.
3. Mark on chart. Outline of extremities to be stamped on back of sheet.

III. Injections

Date. Solution. Amount. Site. Result.

Solution used. 50% dextrose solution
30% sodium chloride solution
Mix equal parts of the above.

Amount of injection 2-10 cc. depending on site and size of veins to be injected.

At the present time we can make no report regarding our success with this method as we have only recently commenced to use it.

As noted previously it is the rule in the Hospital and Dispensary that Tetanus Antitoxin must be given all patients presenting a break in the skin. This general rule has emphasized to the students the importance of this treatment and saved we believe a good many lives. We are very careful to test the sensitivity of each individual to horse serum. The antitoxin is diluted one to ten with normal salt solution. Sterile water can be used if desired. We are employing two methods for the test at the present time. In one instance a small drop is placed in the eye where in sensitive cases a conjunctivitis develops in from ten to twenty minutes. We also use the usual intradermal injection. Either method gives very satisfactory results.

The following outline regarding methods has been developed by Dr. S. C. Harvey and is posted in the Surgical Clinic.

Tetanus Antitoxin

Before administering tetanus antitoxin.

1. Inquire for history of asthma and hay fever, or previous serum treatment. If positive call Resident for instruction.
2. Test for sensitivity as follows.
(a) Inject small intradermal wheal of antitoxin.
A sterile tuberculin syringe and a bottle of antitoxin will be kept prepared for this purpose.
(b) Wait 30 minutes for local reaction.
(c) If positive reaction call Resident for instructions.
(d) If negative reaction give 1500 units tetanus antitoxin.
3. Tetanus antitoxin is to be given all injuries involving a break through the skin. Start the test for sensitivity promptly so that the time of the patient and the physician may be saved.

Serum for desensitization of the patient

Dilute 1500 units tetanus antitoxin with 30 cc. of sterile water.

1st dose	intracutaneously	.1	cc.	of diluted	serum
2nd "	"	.2	cc.	"	"
3rd "	"	.5	cc.	"	"
4th "	subcutaneously	1.	cc.	"	"
5th "	"	2.	cc.	"	"
6th "	intramuscular	5.	cc.	"	"
7th "	"	10.	cc.	"	"
8th "	"	Remainder			

If there is any reaction with any dose, procedure must be started again from the beginning.
Doses given twenty minutes apart.

Owing to the large amount of fluid to be injected when the seventh and eighth doses are given we have had considerable trouble with the 1 — 30 dilution in its use with children. Dr. James Trask of the department of Pediatrics has suggested the following modification. Use serum in 1 — 10 dilution instead of 1 — 30.

Start with	.1	cc.
One-half hour	.2	cc.
One hour	.5	cc.
One and one-half hours	1.	cc.
Two hours	2.	cc.
Two and one-half hours	.5	cc. antitoxin undiluted
Three hours	1.2	cc. " "

We realize that in actual practice desensitization places a considerable burden on the time of the practitioner. It must be remembered however that the number of cases needing desensitization in the office are comparatively few.

It is very important however before the injection of tetanus antitoxin to dilute one drop of the serum with ten drops of water and either place a drop of this in the eye or inject the small amount needed to make an intradermal wheal. One of our recent graduates did not do this as his colleagues at one of the hospitals did not think the precaution necessary. It happened that his patient developed giant urticaria and such a marked oedema that her condition was serious for several days. Taking a chance when so much toxin antitoxin and other proteins are being administered is we think unjustifiable even though the mortality rate is only 1 — 50,000.

A few children even after desensitization develop such symptoms as fever, adenitis, arthritis, abdominal pain and distention. What the result would have been without desensitization in such a case is obvious.

In conclusion I would like to emphasize the following points:

1st. The vital importance, to the future of the Medical Student of acquiring the habit of making thorough physical examinations.
2nd. The great responsibility of the teacher in insisting on this point.

3rd. The importance of careful supervision of the work of the student in the clinic by the attending surgeon. Lack of interest here is reflected throughout the entire personnel. There is often a tendency to underestimate the importance of Dispensary work.

4th. It is very essential that if the appointment system is to be adopted the clinic be open all day. The work should not be crowded into a morning session.

5th. I would like to emphasize the importance of the location of the clinic in close conjunction with the Hospital wards, the operating rooms, and the accident rooms if the student is to secure the most thorough training possible.

6th. It should be recognized that the chief factor causing poor work by the student is crowding the treatment of a large number of cases into a comparatively short period of time. As long as this is done teaching, histories, physical examinations, and treatments all will be unsatisfactory. This again illustrates the importance of morning and afternoon sessions for the clinic.

Discussion

Dr. Lyman Allen, Burlington, Vt.: I wonder if the rest of you thought as I did while you listened to Dr. Hartshorn's paper, how different it was from the instruction that we had. Then think a moment how different that must be from the instruction that we in Vermont can give our students. Dr. Hartshorn's plan requires a great deal of money as well as a great deal of time and space and so, while it seems to me that that plan is as near ideal as could easily be thought of, to us in Vermont it would be absolutely impossible.

Do you realize that the population of the State of Vermont is only 360,000. How many have you in this vicinity? Why, there are 360,000 within a stone's throw, and the same thing holds true in Boston. Vermont is the only state that has to fight against inadequate clinical material.

As many of you know, our hospital is on the top of a hill and the dispensary people would not come to the Hospital and so the College was forced to start a dispensary down in the town. That is managed by the College in connection with its other teaching and the chief of the dispensary is the city physician, which means that he also looks after the poor in their homes, through the fourth year students who are doing dispensary work.

Even that was not sufficient. We had to get more material for clinical teaching, such as you get easily in your dispensary; so a year ago Vermont adopted the plan of splitting the fourth year class into two divisions, the extramural class and the intramural class. One half remains in college to midyear's, receiving lectures until that time; the other half is scattered over the state and during the last half of the college year their positions are reversed. It is like the old preceptor method. It was tried out in the University of Michigan for occasional students but never has been tried anywhere else with the class as a whole.

We have about twenty in each half of the class and they go in rotation from one institution to another. They go to Pittsford, where the State Tuberculosis Hospital for incipient cases is located and to the Washington County Hospital in Barre for advanced tuberculosis cases, to Brandon School for feeble minded, to the State Industrial School and to the State Insane Hospital at Waterbury. They go to some of the smaller hospitals which have no resident House Officers and they go to certain selected doctors in ordinary country practice in Vermont, staying about three weeks in each place, rotating from one to another, so that at the end of the half year when the extramural student returns, he has had training under the ordinary general practitioners of Vermont and he knows what it is to drive over the hills and to have ordinary office practice. He has been a house officer in a tuberculosis hospital, in an insane hospital, in the institution for the feeble minded, and so on, and he returns to his classes.

We found last year that he returns enthusiastic. He is a much better student than when he went out. He stays for lectures for the last half of the year and the other half of the class goes out and does what he has been doing.

Of course, that is very different from Dr. Hartshorn's plan. We can't carry out his plan. We have tried this other for one year and the reports of students, preceptors, and institutions alike have been extremely encouraging. The students came back enthusiastic. They had handled patients themselves; they had been off on all-night baby cases out on the mountains; they had ridden over the hills, and they knew what it meant to practice medicine under disadvantageous conditions, and they knew a whole lot more about the insane, the incipient T.B., the diagnosis of the ordinary children's diseases, etc., than they could have learned in the Medical School.

Last June we had a meeting of the preceptors and heads of the different institutions where the students had been and we asked them to tell us frankly what they thought of the plan and what their opinion was of the boys' work. We had some criticism, of course, but on the whole the reports of those men were favorable. They all said they wanted the students again and they wanted another class to do the same thing and so we are repeating the experiment.

That is Vermont's method of handling the dispensary question.

Dr. David Cheever, Boston, Mass.: I am sure we are all very grateful for the introduc-

tion of a topic connected with medical education. We ought not to forget our responsibilities as medical educators. Somebody said to me yesterday apropos of California, that there was an inhabitant of California who said that all the world was divided into two groups, one group who lived in California, and all the others who wished they did.

All doctors who are medical educators are in two groups, those who have the opportunities that Dr. Hartshorn has described, and those who wish that they had.

It seems to me that as Dr. Allen points out, the ideals which he describes for us for an outpatient department, are almost unattainable for most of us at present, but it is perfectly splendid to have Dr. Hartshorn elevate to its proper dignity and importance the outpatient department, which has necessarily in the past been so much neglected both in its treatment of the ill and in its usefulness as an element in teaching.

I wish I could do justice to my memories of the Boston City Hospital when I was there. The students were in a crowded, poorly ventilated room. The patients streamed in from the desk of the house officer, each bearing a little slip of paper on which was scrawled a number, and those numbers constituted a code. No. 1 meant a dry dressing. No. 2 meant creolin poultice. No. 3 meant clean up and apply zinc oxide and a pressure bandage. We set to it tooth and nail to carry out instructions. Ours not to wonder why; ours but to do and die! (Laughter.) At the end of the morning we were perfectly exhausted.

Dr. George Henry Michael Rowe was the Superintendent of the City Hospital and he was a most efficient administrator and a great guardian of the city's finances, one result of which was that he did not permit the use of any manufactured adhesive plaster, but certain denizens of the hospital manufactured it in the hospital basement, spreading horribly sticky stuff over canvas which we were instructed to use for holding splints, and we got it all over our clothes and on our hands and on our hair, through which we ran our fingers through dismay caused by the splints which as a rule came off to the material disadvantage both of the student and of the patient.

It is interesting to see how this system of Dr. Hartshorn's which he has described, approximates the old apprentice system which is also described in purer form by Dr. Allen, and that is, that under Dr. Hartshorn's system every student is considered a physician. He has his little office which contains a desk, an examining table, an instrument table, and chairs. He takes his history and carries out the whole treatment, supervised by some more competent man.

One thing is particularly striking to me about it and that is, I wonder whether that supervision is by a man not much senior to the student, whether it is only a house officer or perhaps an assistant resident, or a visiting surgeon somewhat approaching the competency of Dr. Hartshorn.

I see in this system as applied in a hospital, the possibility that the student would be supervised chiefly by very junior men. I think it would be perfectly ideal if a man of experience such as Dr. Hartshorn could do it, but how could he, all day long in an all-day clinic? So, I think the old system had one advantage at any rate, which was that there was a competent junior visiting surgeon, as, in my day. Dr. Lund, for instance, who gave what time he could to the outpatient department and to whom in a few lucid intervals, or possibly "Strange Interludes" we might call them, we came and got some really first-class instruction, and those were the bright spots in the day.

There is just one thing I should like to point out. Dr. Hartshorn spoke of the great advantage of working up these cases thoroughly in the outdoor department before they are admitted to the hospital, saving expense and the time of the visiting men in the hospital and affording certain other advantages. There is nothing perfect in this world and that very system has its disadvantages because, it seems to me, it is very disadvantageous for the surgeon or the physician who has to treat the patient in the hospital, and disadvantageous especially for the house-staff not to have any hand in these diagnostic procedures. They are bound under modern conditions to have a good deal done for them, but it seems to me that so far as possible the men in the hospitals, the surgeon who is going to operate, for instance, ought to go down to the fluoroscope room and see the patient there and discuss the problem with the radiologist. It is a tremendous advantage to have seen a deformity of the diaphragm and certain other things which indicate perhaps a subphrenic abscess, and so forth, and in spite of what advantages the other system has. it also has the disadvantage of taking that away from the men in the house.

In closing I want to congratulate Dr. Hartshorn on his opportunity for developing what seems to be an almost ideal type of dispensary clinic, and I congratulate still more the hospital which he serves for having such an enthusiastic man to carry it out.

WHAT CAN THE MEMBERS OF THE NEW ENGLAND SURGICAL SOCIETY DO TO IMPROVE THE TREATMENT OF FRACTURES?*

BY CHARLES L. SCUDDER, M.D.†

FOR the difficulties and disheartening situations in connection with fractures we should seek appropriate remedial measures. To this end may I tell you of my recent trip, under the auspices of the American College of Surgeons, this Spring covering a period of nearly two months. May I tell you also of certain helpful suggestions that came from that trip.

We visited among other places Phoenix, Arizona, Los Angeles, San Diego, San Francisco, Tacoma, Seattle, Portland, Wenatchee, Winnipeg, Minneapolis, St. Paul, Lincoln and Omaha. Sectional meetings were conducted by the College and instructive clinics were given by local men. There were public meetings at which popular medical subjects were talked of, there were hospital conferences, and clinical meetings of local societies.

During this series of visits it was possible to determine more or less accurately who were interested in fractures and what they were thinking about fractures and what treatment was being employed in certain cases. Many personal contacts were made and as a result some nineteen Regional Committees were formed. These committees will help to keep the fracture problems of each of these regional communities well in hand.

The places visited have exhibited special phases of problems to be solved and these phases and problems varied considerably. One community was establishing a fracture service in a large hospital. Another community had to do with certain problems connected with malpractice suits. There were problems in each region that were tremendously important and interesting.

From these experiences I have crystallized certain suggestions. It appears to me that the subject of fractures is very important from the public and professional points of view. I believe that it is so important that it commands our New England Surgical Society to take steps to improve the fracture situation in New England.

This may be accomplished by our Surgical Society having appointed a small active committee to assemble the facts and stimulate each center and each hospital to clean house, to improve conditions. This means the introduction of a method of keeping hospital records, of keeping follow-up records, of establishing some sort of fracture headquarters in each hospital, and finally carrying on in the community local propaganda in connection with the winter meetings. Practical subjects in treatment may thus be brought up for discussion and mutual benefit.

These things cannot be done by individuals as well as by a group of surgeons. They can be accomplished by organized effort. In other words, some individual or individuals in each community should be made responsible to the Committee of our Society in the leading hospital or hospitals of that community for what is going on in connection with fracture treatment. Thus will the standard of fracture treatment be elevated throughout the whole community.

The greatest barrier to progress in surgery today, I believe, is delay. As has been said, surgery has been made safe for the patient. I believe it is important to make the patient safe for surgery. There is no group of surgical diseases or surgical difficulties in which delay causes more difficulties in treatment and poor results than in fractures. Early treatment of a fracture is easy. Delayed treatment of a fracture is difficult.

There is a body of knowledge concerning pathological processes, gall bladder infections, etc., etc., which we have been discussing for the last few minutes. There is a body of knowledge about pathological disease or diseases in general which is common to the whole medical community. There is, as yet, no such body of common knowledge about the treatment of fractures upon which we can at all depend. I believe that having in each of our communities, Lowell, Burlington, Brattleboro, Springfield, Worcester, Boston, everywhere, a few individuals interested in furthering the good things in fracture treatment would help tremendously in the general advance and in the quality of fracture treatment in each of those communities.

Dr. Osgood said in his presidential address, and I think you will agree with what he said, that this Society possesses the ability to exercise more power in shaping public opinion on surgical matters in New England than does any other body. The membership is picked from skilled surgeons in each community. Its influence is flung far wider than its geographical limits. Its influence extends all over this country. The medical leadership of New England has been a respected leadership. I believe that the responsibility emerging because of this position should be stimulating as well as sobering. It behooves us to deliberate well on the problems connected with fractures and to make every effort to aid in their solution.

The untangling of the difficulties arising from fracture problems will require many years of

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continuous well directed effort. The present membership of the New England Surgical Society can devote its thought and effort to no more productive end than improving fracture treatment in the hospitals of New England.

Discussion

Dr. Frederic J. Cotton, Boston, Mass.: *Mr. President and Members*—Of course, you all know that a lot of work has been done. Dr. Scudder had a large part in the work of the American College of Surgeons on this fracture matter and other phases in the so-called General Fracture Committee and it is only within a year that we have had much of anything to report in that line on the general improvement.

The first thing that was done was put through only a year ago and consisted in the preliminary announcement that decent follow-up on fractures was to be made a part of the necessary qualification for a Class A Hospital. That is not in force yet, but it will be presently. We are moving along this way. That is all the College has done as a College in general as yet.

The Committee has done a good deal and managed after a fashion to do what Dr. Scudder has spoken of, get one man as a representative of the hospital or community particularly interested in fractures, and has made it possible for them to get together in the various regional meetings and talk things over and learn a good deal from men who are supposed to lead and from one another.

What he has just spoken of is along that same line and it seems to me very reasonable that the New England Society should take this thing up because New England is a pretty compact sort of section and it is, more than that, rather likely to be left out of the educational program of the College of Surgeons because we are supposed to be able to take care of ourselves and think for ourselves, and we ought to do it, and it would be appropriate, I think, to have a committee appointed by the Chair to look into the matter and see how this Society could take care of the plan in improving the fracture treatments, and that is, the gathering of these cases into comparatively few hands, representatives in the hospitals and communities.

If such a committee were appointed, I think the work would be very simple. It could be helped out by what has been done and the committee would have authority that would come in handy.

One thing more is done. The problem in fractures has become a particularly complicated one of late for the smaller communities. A large portion of the fractures today are the result of automobile accidents. They are likely to be very serious and they happen anywhere, not just around industrial communities which are pretty well equipped to handle them, but they may happen to come into any of the small hospitals all over the New England States, and I have been around to some of them and have been rather struck with the fact that the hospital situation is incompetent to handle the traffic situation, so to speak, and that a lot of the places had perfectly good hospitals in a sense, but no one in the community was particularly interested and when they had a smashing accident with three or four cases of injury, they were not very well taken care of. The men in the hospitals knew that, didn't like it, but were not quite ready to take up the plan of having some one man do it, and that is about the only way it is going to be done.

At Hyannis, down on Cape Cod, they came to the conclusion that they would have to do something about it. This year one man took care of it and the situation is much better. A lot of men must go into it even though they are not now particularly interested in it, but they should get ready to go into specialization or partial specialization along that line very soon.

I should like to move that the Chair appoint a committee to consider the question as to what we should do in the way of facilitating fracture education and fracture handling in New England.

President Truesdale: Should you say that the committee should consist of three members?

Dr. Cotton: Yes, I should say so.

The motion was regularly seconded, was put to a vote, and was carried.

Dr. Arthur T. Jones, Providence, R. I.: I should like to say a word as to what we have done in our hospital in Pawtucket. We had this proposition to deal with. Fractures were admitted to the general surgical service. No man was particularly interested in them, so we asked the assistant to look after the case. The assistant as a rule was not particularly interested and usually asked the internes to put up the fracture. It was done. The assistant looked at it and said, "That is pretty badly done. I will do it over," so he did it over, and then the visiting man came in and said, "That is a little bit worse than before, so I will do it," and afterwards it was looked at again, and it was still worse than when the assistant had done it. I think it was about six years ago that I suggested that we turn over the fracture work to the orthopaedic surgeon so that he might have it from the beginning and not have it tampered with and abused and finally get it at the end when neither he nor the patient had a fair show.

So, for these six years the fracture work there has been in charge of an orthopaedist of skill, and he with his skilled assistant have taken charge. Our fracture work should not be recognized now when compared with the work of six years ago and previous to that time.

Dr. Scudder: The situation in Pawtucket is now quite ideal. The question of the ortho-

paedic surgeon versus the general surgeon caring for fractures is an old one, pertinent since the war, and the answer in any community is always the same. If the orthopaedic surgeon is competent and desires to treat fractures let him have these cases. If any man in general surgery is competent, let him take these cases. It is not a question of whether the orthopaedist should be deprived of or given the fractures. It is solely a question of the competency of the individual.

At Pawtucket, if a fracture of the pelvis comes to the hospital with a rupture of the bladder, or a fractured rib with penetration of the lung, or a fracture of the skull with symptoms of compression, the orthopaedic man is not called upon in the first instance, the general surgeon cares for the case.

I should like to say one further word, if I may, that all our combined interest in this subject does not tend necessarily to establish specialists in fracture treatment. It does not tend to take fractures away from the care of the general practitioner. Fractures will always be treated by the general practitioner, they always have been and always will be. Specialists will arise within the surgical profession and among orthopaedic men who are surgeons, in spite of the profession and because of concentration on that particular job and training in that subject.

Any general practitioner may take care of a fracture ideally as an emergency and turn it over to someone who understands well how to initiate and continue satisfactory, permanent treatment.

You and I need to arouse ourselves to the importance of doing something to improve the treatment of fractures in the community in which we live, while we have the opportunity. There is no time like the present.

COMPRESSED AIR RUPTURE OF INTESTINES*

BY D. C. PATTERSON, M.D.†

RUPTURE of the bowel due to the entrance of compressed air is one of the uncommon emergencies that surgeons practicing in an industrial section like New England, may encounter. It is on this account that I bring it to your attention and report on several cases that have come to my notice.

That it is an unusual condition is attested to by the fact that Dr. Hays of Pittsburg in a review of the literature in 1926 found only 32 cases recorded. As he also mentioned,—there are undoubtedly other cases that have not been reported in the medical press.

Dr. Hays reported a case of his own and abstracted the twenty-two operative cases on record in *Surgery, Gynecology and Obstetrics* for October 1926. I have made use of his abstracts to table the most frequent sites of rupture.

The condition is produced either accidentally or intentionally by air from a compressed air hose entering the intestines through the anal opening. It is not necessary that the nozzle of the hose should come nearer to the body than six inches, and in most of the cases reported the air passed through the patient's clothing. In several cases where the patient was the unfortunate victim of a cruel impractical joke, the clothing was removed and the nozzle was inserted into the anal opening. In two of the cases at Bridgeport the injury occurred during the process of dusting off workers' clothing, though in neither case was it accidental.

Jean quoted by Hays reports a truly accidental case. Here the patient was sitting on a bench with the anal region beyond the edge of the seat. A compressed air tube with 117 pounds pressure was lying underneath the bench at a distance from the seat of four to eight inches. In some way the tube exploded, and the air entered the colon.

The first symptom is intense pain in the abdomen, followed by distention, and generally collapse of the patient. A recent case was reported from England in which a boy of 14 was inflated from a hose with a pressure of 100 pounds to the square inch. He screamed with pain, then collapsed, and died within a few minutes.

The respirations are very shallow and rapid. In the last Bridgeport case cyanosis was very marked. The pulse is rapid and weak; vomiting occurs, possibly due to the tremendous pressure on the stomach. The abdomen is greatly distended, the navel and inguinal canals bulging from the pressure within. Some reports mention the presence of blood about the anus, and others a subcutaneous emphysema. With the history and physical findings, diagnosis should be easy, though it may be difficult to say whether or not perforation has occurred.

The prognosis is, of course, grave. In the operative cases reported by Hays, the mortality was 50%. Like any other intestinal perforation the prognosis will depend upon the length of time between injury and operation. Of those operated on within six hours, only two died.

Three cases of this type of injury have occurred in Bridgeport during the past twenty years. They were all the result of fooling. In one case the victim was thrown to the floor, his clothing removed, and the nozzle of the hose inserted into the anus. He died before any medical aid could be rendered. I was unable to get any more data regarding this case.

A second case, that of John Trinka, occurred

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in 1908. He was a Russian laborer 19 years old. As the men were cleaning up after the day's work, he was seized by some of his co-workers, his clothes removed and the nozzle of the air hose inserted into his rectum. He recovered from the immediate effects of the treatment and went home. As he was having considerable distress he inserted some soap sticks to get relief. He had no medical attention and died the following morning. An autopsy revealed a tear in the sigmoid, and the abdominal cavity full of air, feces, and pieces of soap.

The latest case was that of George Mike, a Syrian laborer, 36 years of age. He was a medium-sized man with a history of previous good health. A fellow workman was dusting the patient's clothing with compressed air from a tube, under 98 pounds pressure, and playfully pressed the nozzle against his anus. The patient yelled from pain and collapsed. He was sent immediately to the hospital and arrived there about twenty minutes after the accident. While on the way to the hospital he vomited several times. On admission the patient was in great distress. He was cyanotic and breathing very lightly. His head was thrown back and his body rigid. The chest was expanded and there was but the slightest respiratory movement.

The abdomen was distended and tense as a football. It was tympanitic throughout, and very tender. There was no blood about the rectum, and no subcutaneous emphysema.

The abdomen was opened within an hour of the receipt of the injury, a small incision being made in the peritoneum to allow a slow escape of the air. I was afraid he might be decompressed too rapidly. I expected to find a tear in the sigmoid, but this was intact. Further exploration of the intestinal tract showed an extensive tear in the serosa on the anterior surface of the colon at the hepatic flexure. Air was coming from the retroperitoneal tissues at this point. I could find no opening into the bowel, and decided that it was probably very small and would be impossible to find. The gut was slightly distended, and I thought that with the gut collapsed it would take care of itself, so I merely replaced the torn serosa. There was no evidence of any fecal content or odour in the abdomen; however, I left a drain at the site of the injury, and another one in the lower abdomen, when closing.

The operation lasted twenty-five minutes and the patient's condition improved steadily. He returned to the ward in fair condition.

Convalescence was uneventful. For the first two days he complained of abdominal pain. His temperature rose to 101 the second day. He vomited twice on the third day but from then on he was quite comfortable. He was up and about on the eleventh day and was discharged from the hospital on the eighteenth.

A radiographic examination made three weeks after the operation was reported as follows:—"X-ray of the colon after injection of Barium shows marked distention of the cecum, ascending and transverse colon. There is an annular constriction in the middle of the ascending colon, probably congenital."

The patient returned to his usual work in about six weeks. I have seen him within the past year and he has apparently had no later ill effects from his injury.

In a review of the 22 operative cases cited by Hays and of the 2 Bridgeport cases in which the seat of rupture was known, I find that the sigmoid was involved in 10 cases,—the splenic flexure in 1,—the hepatic flexure in 1,—the rectum in 2. Laceration of the colon was stated in 8, but the portion was not mentioned,—transverse colon in 1. In one case reported by Andrews in which operation was performed 18 hours after the accident, no perforation was found and no air was present in the abdominal cavity; however, a laceration of the serosa and muscular coat of the gut was present. This patient died. In the absence of any air in the abdominal cavity in this case, it appears probable that there was no perforation through the mucosa.

Hays states, "The pathology noted in the entire series has been about the same. The striking feature is the great amount of free air in the abdominal cavity. The large bowel including the rectum is the only part of the intestinal tract which so far has been perforated. There is usually some blood and more or less faecal matter in the abdominal cavity. In addition to the perforation of all the coats, there is more or less tearing of the serosa and the muscular coats. This has been very extensive in many of the cases. The tearing of these coats is usually along the anterior-longitudinal part. The small gut has in many instances been damaged but never perforated. The mesentery of the small gut was torn in one case. Subcutaneous emphysema was noted in a few cases. In one case (Stevens), free air was found in the retroperitoneal tissues" (this was also present in the case I operated on) "and in another (Hailes) the mediastinum was involved with collapse of the lung. The perforation is usually single, but multiple openings have been noted. The size of the perforation varies. Some are very minute, others are quite large. In two of the cases, recovery occurred without operation. There is no means of telling whether they had a perforation or not. It is quite probable that they had a tearing of the serosa and possibly the muscular coat which healed by first intention. In a number of the cases reported, while there was air in the abdominal cavity, it was impossible to find an opening in the mucous coat. Jean states that it might happen in this way: 'The opening in the mucous coat occurs at some extraperitoneal part of the gut and enters the abdominal cavity after going through the subperitoneal fatty tissue and the peritoneum.' " This was true in my case. Some explanation like this must be correct. Stevens found air in the retroperitoneal tissue in his case in which the perforation was at the splenic flexure.

This is interesting in view of the fact that the injury in my case was at the hepatic flexure and I found a large amount of air in the retroperitoneal tissues. They are the only cases in which the condition was noted.

Operative measures should be taken in these cases as early as possible. A tube should be inserted into the rectum before any other operative procedures are done to relieve the air on the chance that the bowel has not been ruptured. Paracentesis of the abdomen could be done quickly and would relieve the pressure on

the diaphragm. Should I have another case I would do this as a preliminary procedure. The abdomen should then be opened providing the patient's condition warranted it, and search made for the injured intestine. The extent of this injury will determine the proper repair, suture or resection. It may be advisable to do a colostomy to relieve the repaired segment. I think drainage should be provided on account of the great danger of infection.

As a preventive measure I think the practice of workmen dusting each other's clothing with compressed air should be strictly prohibited. I can think of no way to guard against the viciousness of practical jokers unless it be by the use of posters describing the dire result of such a joke.

Discussion

Dr. Ralph W. French, Fall River, Mass.: Mr President, having had no experience with this particular accident, I was asked by Dr. Patterson to open the discussion from the point of view of traumatic rupture of the intestine from some other cause.

The point I wish to make, I think, can best be illustrated by the description of a very short case of a carpenter, twenty-five years old, who was brought to our hospital by his employer within twenty minutes after the time that he was struck in the abdomen by a flying piece of wood from a circular saw which he had not seen coming. In other words, it was the classical history of a rupture of the intestine. Upon examination he had only a slight abrasion of the skin about the size of a silver dollar just to the right of the umbilicus. He had no symptoms, considered the affair a joke, and thought it was ridiculous that he had been brought to the hospital.

A white blood count done at that time was 8000, and examination of his abdomen was entirely normal. I failed in my endeavor to get him to stay in the hospital under observation for a few hours. He wished to return to work. He finally promised that he would go home and report any symptoms. Two hours later his wife telephoned that he had a little pain in his abdomen and slight nausea. I was busy at the moment, and sent Dr. McAdams to see him. I told him of my fears of a ruptured intestine, and urged him to bring the patient to the hospital. He succeeded in getting him back to the hospital, and reported that his abdominal examination was still normal. His white blood count on admission was 9000.

Two hours later the white blood count had increased to 12,000; and two hours after that, it had jumped to 15,000. At that time, when he was operated upon, he had very definite tenderness and muscle spasm in the right lower quadrant of his abdomen. At operation a single tear was found in the ilium about six inches from the cecum. It was about an inch long, and was repaired. The patient recovered.

The point I wish to emphasize is the value of white blood counts done within the first few hours for comparison in suspected cases of traumatic rupture of the intestine.

Dr. Horace Sowles, Boston, Mass.: I do not feel that I am entitled to intrude. My remarks started an informal discussion of this particular thing. It so happened that I saw one of the only two cases which we have had of this condition at the Massachusetts General Hospital and both these cases happened to come in from the Readville shops of the New Haven Railroad. They had a practical joke played upon them by one of their fellow employees, that of inserting the nozzle of the air hose, containing eighty pounds pressure, in or near the anal opening. Both of these cases had rupture of the sigmoid and both died.

I have since discussed the subject with other men and as far as I have been able to find out, they have been universally fatal. No particular clinic has had many of them, but the large industrial insurance companies have seen quite a number. I happened to speak to Dr. Henry Marble of the American Mutual Insurance Company and he said they had had a lot of them. I said, "How many is that?" He said, "Perhaps ten or twelve."

One of the interesting problems in connection with these cases is the question of the legal liability, whether the employer is liable for the death of an employee which happens as the result of a joke on the part of another employee, and often after working hours. The courts say that the employer is liable.

Dr. Daniel F. Jones, Boston, Mass.: I am tremendously interested in this subject, especially this last statement about the employer being liable for somebody else's practical joke. When we were in Chicago a short time ago, we saw in the autopsy room a child with rupture of the small intestine from an enema given by the mother.

Of importance along this line of rupture of a viscus by pressure of air from without is the giving of ether with a Connell apparatus. There has been a comparatively recent case in which the tube was put down so far that it entered the oesophagus and blew up the stomach to such an extent that it was ruptured. Suture was necessary. Dr. Holmes has just told me of a case in which the stomach was distended in the same way in using the Connell apparatus. He was quick enough to discover what was happening, removed the ether and deflated the stomach without any harm being done. So simple a procedure as pharyngeal etherization can do harm if improperly used.

Dr. Frederic J. Cotton, Boston, Mass.: I suppose I ought to state a case, partly to add to Dr. Patterson's list, and partly to offset the depressing effect of Dr. Sowles' remarks. I had one of these about eighteen years ago, the same

typical thing as Andrews had reported in his cases, which I think were the first.

He was a boy of about sixteen, the same old story, the victim of a Slavic sense of humor in one of the factories. The air entered through the clothing, at what distance we don't know. I operated immediately, without stopping for anything and found the usual bellyful of air, and the surprising thing to me is that they are not killed by the sheer pressure. They don't seem to be. There were two tears, one in the splenic flexure, and the other near the head of the cecum, not very large. We sutured them both and he got well.

DR. JAMES J. GOODWIN, Clinton, Mass.: I was going to ask if there is any criminal action taken against the perpetrators.

PRESIDENT TRUESDALE: Is it a criminal joke or a fraternal joke?

CLOSING DISCUSSION

There was one case of rupture of the bronchi and stomach from compressed air reported. The patient was holding an air hose in his mouth when it burst. He died as a result of rupture of the bronchi and of the stomach.

In the last few years the colon has been subjected to a great deal of ill treatment. I have wondered if any cases of injury have occurred as a result of these numerous irrigations.

There was an interesting case of ruptured colon reported in 1926 by Dr. Hawkes of Newark. The patient was fifty-two years of age and had been in the habit of relieving himself with enemas twice a week. He would attach a tube to the faucet in the bath tub and lie in the tub, and after inserting the other end of the tube in his rectum would turn on the water. One morning he didn't seem to get the proper sensation of the rectum filling, so he turned the faucet a little more. He experienced severe abdominal pain and was rushed to the hospital where immediate operation revealed a rupture of the lower bowel. He made a good recovery.

Mortality, according to Hays, is 50% in the operative cases and a little less in the unoperated cases. In these there was a mortality of 45% but they probably did not all have perforations. Dr. Cotton's case which occurred about eighteen years ago was included in the series reported.

I could hardly say that these accidents were the result of criminal action, yet none of the cases that occurred in Bridgeport were entirely accidental.

Use of compressed air for dusting worker's clothing should be prohibited. I believe such action would practically eliminate the danger of these accidents.

TUFTS COLLEGE MEDICAL SCHOOL

Dean A. Warren Stearns was the principal speaker at the smoker held by the freshman class of Tufts Medical School at the University Club. Other guests were Dr. Benjamin Spector, chairman of the faculty committee on student relations, and Prof. F. J. Keller of Harvard, who offered points on the Art of Fine Eating. Entertainment was provided by a local cabaret group.

An innovation has been made in the form of a freshman advisory committee composed of members of the class. Members are appointed by the class president, Lorrimer M. Schmidt, under the approval of Dean Stearns and Dr. Spector. Representing the various groups are Theta Kappa Psi, Lorrimer M. Schmidt, No. Billerica, Mass.; Phi Chi, Alfred B. Sundquist, Cranston, R. I.; Alpha Kappa Kappa, John H. Gordon, W. Hartford, Conn.; Lambda Phi Mu, Vincent Balletto, North Haven, Conn.; Phi Delta Epsilon, Samuel S. Levinson, Brookline, Mass.; Tau Epsilon Phi, Nathan H. Friedman, Stratford, Conn.; Phi Lambda Kappa, Barnett Weinstein, Peabody, Mass.; non-fraternity, Carl Seltzer, Dorchester, and Leo T. Tirrell, W. Roxbury, Mass.; Women, Mary I. Tompkins, Ebensburg, Pa.

DUKE UNIVERSITY SCHOOL OF MEDICINE

Announcement has been made by President W. P. Few, of Duke University, that the General Education Board of New York has authorized grants to the Duke University School of Medicine totaling $300,000 and running through a period of five years.

The new School of Medicine will admit on October 1 first and third year students, chosen on a rigidly selective basis. The four-quarter session idea will be one of the distinctive features of the institution.

DIFFICULTIES ENCOUNTERED IN THE OPENING OF THE NEW STATE HOSPITAL IN WALTHAM

Dr. George M. Kline is quoted in the papers in explanation of the delay in opening the new State Hospital for the insane at Waltham to the effect that the city of Waltham had contributed to the delay by uncompleted sewerage facilities.

AN ARGUMENT IN FAVOR OF VACCINATION, WITH STATISTICS OF THE INCIDENCE OF SMALLPOX IN THE UNITED STATES, ITS DEPENDENCIES AND CANADA

BY SAMUEL B. WOODWARD, M.D.*

FIVE years ago, in an attempt to focus the attention of the medical world upon the deplorable prevalence of smallpox in the United States, I obtained from the various state health officers such statistics as were available for the years 1913-1923. Conditions were even worse than I had supposed and I regret to say that during the last five years they have shown on the whole little or no improvement, and the United States remains now as it was then the most smallpox ridden country in the world bar possibly China, India and (doubtfully) Russia.

In 1913, however, smallpox was not a reportable disease (heaven save the mark) in Wyoming, Delaware, New Mexico, Idaho, Florida, Nebraska, West Virginia, Arkansas, Mississippi,

SMALLPOX IN THE UNITED STATES AND DEPENDENCIES FOR TEN YEARS 1919-1928

State or Territory	1920 Population	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	Total
Guam	16,225	0	0	0	0	0	0	0	0	0	0	0
Alaska	54,899	5									84	89
Nevada	77,407	89	321	235	59	11	49	97	24	56	61	1,022
Canal Zone	122,713	63	24	184	8	0	0	0	0	0	1	280
Wyoming	194,402	414	911	486	179	20	43	76	22	110	183	2,424
Delaware	223,003	259	27	0	0	2	7	1	3	1	12	312
Hawaii	255,912	0	4	0	2	1	0	0	0	0	0	7
Arizona	334,162	69	176	192	468	100	160	125	18	10	417	1,735
Vermont	352,428	5	101	177	14	256	64	0	0	0	12	628
New Mexico	360,350		311	110	53	91	28	26	49	90	82	840
Idaho	431,866		2,656	894	241	155	547	528	465	769	655	6,783
D. C.	437,571	173	69	66	66	67	147	59	18	63	24	770
New Hampshire	443,083	14	0	19	0	39	10	1	1	0	2	86
Utah	449,396	1,238	5,123	3,499	678	167	117	113	341	891	964	13,031
Montana	548,889	970	1,066	1,485	636	732	950	376	395	575	853	6,019
Rhode Island	604,397	5	1	1	9	0	3	94	0	5	0	118
South Dakota	636,547	1,050	1,534	1,959	1,141	249	286	255	259	409	386	7,538
North Dakota	646,872	211	533	1,777	667	444	574	204	285	210	85	4,980
Maine	768,014	439	246	96	36	118	19	1	12	1	99	1,067
Oregon	783,389	2,626	2,991	1,596	1,141	837	831	863	1,557	1,168	1,975	15,585
Colorado	939,629	1,715	2,898	2,606	1,141	90	72	19	231	553	387	9,682
Florida	968,470	45	428	1,351	318	227	117	206	2,890	1,366	156	7,094
Nebraska	1,296,372	2,844	4,135	3,055	484	97	1,472	691	806	831	286	14,701
Porto Rico	1,299,809	1	2	1	8	0	0	0	0	0	0	12
Washington	1,356,621	4,390	6,146	4,441	1,595	1,623	1,973	2,001	2,413	1,806	1,772	28,160
Connecticut	1,380,631	6	2		447	52	100	5	2	0	170	792
Maryland	1,449,661	229	179	214	17	25	97	16	5	9	22	813
Louisiana	1,798,509	1,226	1,564	1,421	645	693	489	883	960	286	696	8,863
Oklahoma	2,028,283	2,090	2,422	1,365	736	1,164	1,004	775	868	1,644	3,445	15,513
Virginia	2,309,187	2,353	3,569	1,737	513	409	295	320	621	978	217	11,002
Tennessee	2,337,885	1,874	3,002	2,913	567	1,037	3,145	1,810	607	648	815	16,418
Alabama	2,348,174	935	1,442	2,072	623	323	2,393	4,288	1,285	1,242	342	14,945
Minnesota	2,387,125	2,448	6,333	9,375	2,270	1,950	2,740	767	259	109	113	26,364
Iowa	2,404,021	1,784	4,185	6,377	1,104	668	872	645	1,311	1,279	1,899	20,724
Kentucky	2,416,630		1,792	2,367	470	228	322	514	202	395	812	7,102
North Carolina	2,559,123	2,322	2,961	2,513	1,409	3,352	3,945	1,920	1,594	1,702	2,419	24,037
Wisconsin	2,632,067	3,297	5,668	5,116	1,790	1,338	1,236	1,518	360	938	817	22,068
Georgia	2,895,832	1,710	1,328	2,191	756	673	2,107	444	957	1,934	236	12,336
Indiana	2,930,390	3,833	5,775	4,809	1,095	1,910	3,761	2,996	3,571	5,128	3,725	36,593
New Jersey	3,155,900	109	182	255	18	30	340	189	14	21	91	1,249
Missouri	3,404,055			5,400	675	316	536	566	324	1,462	1,719	10,998
California	3,426,861	2,002	4,497	5,557	2,127	2,029	9,445	4,921	2,794	984	1,176	35,532
Michigan	3,668,412	2,381	4,818	1,120	1,230	2,311	4,527	784	549	1,457	1,326	20,513
Massachusetts	3,852,356	40	29	37	2	6	12	3	4	2	273	408
Texas	4,663,228		2,113	1,791	1,427	669	1,380	1,309	1,898	2,341	1,980	14,898
Ohio	5,759,394	4,107	7,209	7,286	2,422	2,415	5,597	4,018	2,133	1,556	1,236	37,981
Illinois	6,485,280	4,671	8,536	8,536	2,116	930	1,356	1,624	1,073	1,236	1,652	31,930
Pennsylvania	8,720,017	229	215	212	85	183	342	206	39	19	72	1,602
New York	10,385,227	191	306	631	255	392	491	286	305	375	189	3,420
Total	107,460,178	62,707	109,639	108,904	34,169	30,313	57,362	39,894	33,896	38,254	38,805	553,945

*Woodward—Ex-President, Massachusetts Medical Society. For record and address of author see "This Week's Issue," page 139.

Louisiana, Oklahoma, Tennessee, Kentucky, North Carolina, Georgia, Missouri, Texas and Illinois, and the grand total of 579,610 cases in ten years did not present a true picture of the situation. By 1918 twelve of the eighteen states just mentioned were collecting statistics. Wyoming and Oklahoma were registering smallpox in 1919, New Mexico, Idaho and Texas in 1920, and in 1921 Missouri at last fell into line, so that we now know (and this is all we *do* know) how many cases state health officials are cognizant of. But as health officer after health officer writes me that many cases are not reported, one declaring that 30% are never sent in to him, and another refusing at first to give me any figures because they were so unrepresentative of actual conditions, it is quite evident that the figures we *do* get represent but a fraction, a large one possibly, but still a fraction, of the cases that exist. Be this as it may, no one who knows anything about smallpox and what preventive vaccination can do for it will deny that the grand total of 553,945 cases in my table shows a disgraceful negligence on the part of somebody somewhere, let us say to salve our medical consciences, the general public.

As to all intents and purposes the Canadian provinces are subject to the same conditions as are we, I have tabulated the Canadian statistics for the same ten year period and can therefore add 35,131 more cases to my list making this a complete census of smallpox in America north of the Rio Grande.

Vaccination sense seems to be in a way segregated in the eastern part of the country, for it is practically here only that there are any adequate laws regulating, enforcing or even suggesting preventive vaccination. In Massachusetts and in Rhode Island, New Hampshire, Maryland, New York, Pennsylvania and some other states we do try to do something, feeble enough in most instances to be sure, but something nevertheless to protect ourselves. We do enforce in a measure what laws we have, do not, as seems to be the case in some other places, allow stringent protective measures to go by default, but in the greater part of the country smallpox seems to be allowed to come when it will, all control measures being contingent on an outbreak, an attempt to close the garage door after the automobile has been stolen, with resultant unnecessary deaths and great economic loss. Dr. Starkhoff, Health Officer of St. Louis in 1924, publicly stated that it cost that city $150 to care

SMALLPOX CLASSIFIED ACCORDING TO NUMBER OF CASES FOR 10 YEARS 1919-1928

State or dependency	Population	Cases		State or dependency	Population	Cases
Guam	16,225	0		South Dakota	636,547	7538
Hawaii	255,912	7		Montana	548,889	8019
Porto Rico	1,299,809	12		Louisiana	1,798,509	8863
New Hampshire	443,083	86		Colorado	939,629	9682
Alaska	54,899	89		Missouri	3,404,055	10998
Rhode Island	604,397	118		Virginia	2,309,187	11002
Canal Zone	122,713	280		West Virginia	1,463,701	12049
Delaware	223,003	312		Mississippi	1,790,618	12136
Massachusetts	3,852,356	408		Georgia	2,895,832	12336
Vermont	352,428	628		Utah	449,396	13031
District of Columbia	437,571	770		Nebraska	1,296,372	14701
Connecticut	1,380,631	792		Texas	4,663,228	14898
Maryland	1,449,661	813		Alabama	2,348,174	14945
New Mexico	360,350	840	9 years	Oklahoma	2,028,283	15513
Nevada	77,407	1022		Oregon	783,389	15585
Maine	768,014	1067		Tennessee	2,337,885	16418
New Jersey	3,155,900	1249		Kansas	1,769,257	18554
Pennsylvania	8,720,017	1602		Michigan	3,668,412	20513
Arizona	334,162	1735		Iowa	2,404,021	20724
Wyoming	194,402	2424		Wisconsin	2,632,067	22068
New York	10,385,227	3420		North Carolina	2,559,123	24037
Arkansas	1,752,204	3758		Minnesota	2,387,125	26364
North Dakota	646,872	4980		Washington	1,356,621	28160
South Carolina	1,683,724	6384		Illinois	6,485,280	31930
Idaho	431,866	6783	9 years	California	3,426,861	35532
Florida	968,470	7094	-	Indiana	2,930,390	36593
Kentucky	2,416,630	7102	9 years	Ohio	5,759,394	37981

SMALLPOX IN CANADA FOR TEN YEARS 1919-1928

Province	Population	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	Total
Prince Edward Island	93,728	0	0	0	0	0	0	0	0	0	0	
Newfoundland*	264,569	148		5								153
New Brunswick	351,889	274	485	118	157	15	0	0	0	0	12	1061
Alberta	496,527	101	536	1043	68	62	265	89	202	481	254	3101
Nova Scotia	523,837	1343	279	115	2	15	0	0	1	1	11	1767
Manitoba	553,860	19	134	205	173	445	739	173	201	113	95	2297
Saskatchewan	647,835	141	390	961	266	154	234	62	237	340	503	3288
British Columbia	650,000	35	576	137	64	232	339	674	95	258	598	3008
Quebec	2,361,199	898	387	377	55	166	173	10	7	112	1058	3243
Ontario	2,933,662	3046	5169	3772	977	339	599	218	706	1523	864	17,213
Total	8,877,104	6005	7956	6733	1762	1428	2349	1226	1449	2828	3395	35,131

*St. Johns only

for a case of smallpox, while preventive vaccination could be provided at an expense of four cents. He also remarked that in eleven years the city had paid out $90,000 for the care of parochial school children hospitalized by it because of smallpox, while not one pupil in a public school since he had been in office (33 years) had been a victim of the disease. St. Louis vaccinates, as we do, public school children; those

SMALLPOX IN CANADA CLASSIFIED ACCORDING TO CASES FOR 10 YEARS 1919-1928

Province	Population	Cases
Prince Edward Island	93,728	0
Newfoundland	264,569	no record except in St. Johns
New Brunswick	351,889	1061
Nova Scotia	523,837	1767
Manitoba	553,860	2297
British Columbia	650,000	3008
Alberta	496,527	3101
Quebec	2,361,199	3243
Saskatchewan	647,835	3288
Ontario	2,933,662	17,213

attending private and parochial schools are, as here, exempt from compulsion.

Last spring a body of citizens went to Governor Allen and suggested that religious scruples should exempt any school child from vaccination. I suppose this to be the same thing as exemption on account of conscientious scruples, which has left England a largely unvaccinated country. Nova Scotia allows exemption for such reasons, so does British Columbia, and so does Maine. In Utah and North Dakota compulsory vaccination is distinctly prohibited and middle western and north western states have no general vaccination law at all. Nova Scotia, which vaccinates all children during the first year and again permissively at school age, has gotten along quite well for the last five years, but had 1,767 cases in ten.

British Columbia with a population about that of Boston had 3,008 cases in the same period. Maine had in the ten years more (1,067) than Rhode Island, New Hampshire and Massachusetts combined and it must be remembered that the recent epidemic here was apparently brought to us from that state.

Our present law is feeble protection enough, let it not be made null and void by adding to it exemption on account of religious scruples.

But it is not in New England that smallpox is such a menace. It is endemic in every one of the middle western states and so little is apparently thought of the possibility, or even the desirability of eradicating it, that the health officer of one of these states with some 22,000 cases to his credit in ten years, an average of over 2,000 a year, writes to me that ——— never had a vaccination law and never felt the necessity for it.

But I am not writing an argument for a legislative committee; that may come later. I only ask that physicians take the trouble to read the accompanying tables, draw their own conclusions and aid any attempt that may be made to strengthen our protective laws.

Turkey and Mexico are going ahead. Smallpox in Turkey always heretofore present, is fast disappearing under universal compulsory vaccination, while, if Mexico can enforce her laws, many citizens of the United States will be met with the vaccinator's needle when they attempt to pass the borders of a state universally vaccinated.

We control the Philippines, we control Porto Rico, which reeked with smallpox under Spanish rule; we have the Canal Zone in the tropics and Hawaii at the cross roads of the Pacific and under our laws Porto Rico has had no case of smallpox since 1922 and but 12 in the previous four years, Hawaii no case for 5 years and but 7 in the previous five, the Canal Zone one case in 1928 and none during the 5 years before and from the Philippines where before our advent smallpox killed several thousand persons every year in Manila alone, Dr. Jacob Fajardo, Director of Public Health, writes me under date of July 11 that there were 84 cases of smallpox recorded in 1924, 20 in 1925, 30 in 1926, 1 (a Spaniard from Singapore) in 1927 and 5 (all varioloid) in 1928. If these records can be made under conditions pertaining in our dependencies, will anyone tell me why we should have during the same period of time 31,930 cases in Illinois, 35,532 cases in California, 36,593 in Indiana, 37,981 in Ohio and 550,000 plus in the continental United States? I pause for a reply.

MEDICAL PROGRESS

PROGRESS IN UROLOGY, 1928-1929

BY HERBERT H. HOWARD, M.D.*

THE writer, after reviewing much of the literature on urology during the past year, believes that there has been no one piece of work done that stands out as showing a distinct progress in this field of medicine.

There is experimental work being done at the present time to devise a better method of kidney drainage in cases of pelvic retention, and if these laboratory experiments prove successful, I believe that it will be a remarkable achievement. This includes cases with or without ptosis of the kidney where there are long tortuous ureters causing functional strictures or kinks.

Nephropexy, I think all will agree, does not, save in very rare instances, solve this problem of pelvic retention. The so-called true strictures of the ureter, which are not nearly as common as one might believe, and which can be treated by intra-ureteral dilatation, are not included.

Progress in the treatment of malignant tumors of the bladder during the past two years has been practically at a standstill. In some parts of the country the urologists are using less radium and more surgical diathermy, with emphasis on the word surgical, and they believe that their results are going to be better than their results with radium have been, although sufficient time has not as yet elapsed definitely to prove this. There is also quite a difference of opinion as regards partial cystectomies. Some men go as far as to say that no cases should be treated by partial cystectomy,—that all tumors of the bladder should be treated either by radium or surgical diathermy, or both.

After studying a great deal of the literature on the end results of these cases, it is my opinion that there certainly are early cases of malignant disease of the bladder that can best be treated by resection. This group includes the tumors that are favorably situated and cases where removal does not necessitate ureteral transplantation. Complete closure of the bladder following cystotomy for the treatment of tumors is advocated by some. Judging by the cases done at the Boston City Hospital during the past three years, I cannot see that it makes any great difference which method is adopted. Those that are closed up tight usually break down on the fifth or sixth day and run about the same course of convalescence as the cases in which drainage is instituted. Metastases in the abdominal wall occur just as frequently in those cases where the bladder is sewed up tight as they do where the bladder is drained.

During the past year and a half, there has been a tendency to do more one-stage operations for the removal of obstructing prostates, and the mortality has not been increased. I am sure that these cases are those with a small amount of bladder residual, or residual containing few pus cells and showing kidney functions well within normal limits. I do not believe that cases showing a large amount of bladder residual and considerable pus can possibly be included in this group.

In place of enucleation of the prostate, with the finger through the old cystotomy wound, some advocate making a much larger incision and dissecting out the gland with scissors, clamping and tying off the bleeding points, the capsule either being sutured or packed with vaselinized gauze.

There has been very little in the literature about the Punch operation during the past year. Most of the men believe that it still has a place in a limited number of cases, especially those of median bar obstructions and, in the post-operative cases, still showing residual urine, which on cystoscopic examination show a heaping up of scar tissue at the bladder neck.

Urologists, during the past two years, have come to realize more and more what conservative kidney surgery really means. The use of the ureteral catheter has in great measure replaced surgical intervention in cases of pyelonephritis, ureteral obstruction and infected hydronephrosis. Ureteral dilatation and pelvic lavage, together with a careful study of the patient for focal infections, have removed the pelvic infection and the retention pelvis in many cases.

In cases of serious bilateral infections, where it is possible to conserve a portion of the kidney, heminephrectomy has been done with satisfactory results.

There are more two-stage operations in the serious purulent cases, with a much lowered mortality.

The kidney with the large stone completely filling or nearly completely filling the pelvis is now treated through a pyelotomy incision rather than by nephrectomy. The postoperative treatment of these cases is of the greatest importance, and in a fair percentage of cases repeated renal lavage together with dilatation over a period of a number of months has rendered the kidney pelvis free of infection. This does not

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include the cases of extensive pyonephrosis, where practically nothing but a shell of the kidney is left.

Formerly when the ureter was accidentally torn during pyelotomy for large stones, nephrectomy was done, but now the conservative treatment is to do an anastomosis, and the end results have been very satisfactory.

The investigation of cases of pelvic retention has also been given considerable attention. There is yet much to be done in the study of this type of case, especially as to accurate diagnosis and treatment. The normal emptying time of a kidney in any position is a matter of a very few minutes, but what effect traumatism from catheterization of the ureter and injection of an opaque solution may have upon prolonging this time, or hastening it, is difficult to say.

There have been practically no new methods of treatment devised during the past two years in cases of gonorrheal infections of the genital tract.

The following abstracts have been taken from various papers on Urology and not only denote progress, but some of them are reported because they are of unusual interest.

KIDNEY

Bugbee, H. S. (*J. Urol.*, Vol. xxi-363, 1929), reports a case of lyomyoma of the kidney in a woman of thirty. So far as is known, this is the only case reported found in a living being. There have been two other such tumors found at autopsy. In his case, a tumor mass had been noted on the right side of the abdomen for twelve years. Pyelograms of the kidney and urine obtained from the right kidney were both negative. The kidney on section showed a large, well-defined tumor in the lower pole, enclosed in a thin fibrous capsule. Sections showed smooth muscle tissue and no evidence of malignancy.

Lauber, H. J. (*Ztschr. f. urol. Chir*, Vol. xxv-93, 1928), in a study of fifty cases of the diagnostic significance of the ampullary renal pelvis, concludes that urinary stagnation is the cause and not the result of the ampullary renal pelvis, and that the latter is a beginning hydronephrosis.

Davis, J. E. (*J. Urol.*, Vol. xx-155, 1928), writing on the surgical pathology of malformation in the kidneys and ureters, classifies these anomalies into three groups: (a) anomalies of position (dystopiae). . . . The kidney may be higher than normal and the suprarenal body displaced medially upon the kidney pelvis, as a result of inequality of growth. The possibility of this medial displacement of the suprarenal on the kidney pelvis must always be thought of when examination reveals a high position of the kidney, together with perinephritis. The most common positions in this group are the kidneys placed at the bifurcation of the aorta, the sacral promontory, over the sacroiliac point, the iliac fossa, and in the hollow of the sacrum. The right kidney is more apt to be found in an abnormal position than the left kidney. (b) anomalies in number. This is the rarest of all kidney malformations. Absence of both kidneys is usually found in foetal monsters. The absence of one kidney is the result of the blighting of a bud on one side, or due to the destruction of one kidney by disease. (c) abnormalities of form. These begin in the early development of the ureteral bud. The usual cause of horseshoe kidneys is a change in form involving both buds, and this type constitutes about 25 per cent of renal malformations. The most common anomaly of the ureter is the complete, or partial, duplication of the ureter. The congenital polycystic kidney is the most important condition to be considered in this group. There are three stages in the course of the polycystic kidney. The first is the latent stage, which may continue for a short time, or for many years. The second stage has both subjective and objective symptoms, such as dragging down pain and hematuria. This stage may continue for a few months or a few years. The third stage may extend over a few weeks or months, and is characterized by uremic symptoms. The objective signs are tumor mass in one or both kidneys, hypertension, a urinary sediment similar to that of interstitial nephritis, and a positive finding in the pyelogram.

Smith, G. G. (*N. E. J. M.*, Vol. cc-67, 1929), making a study of fifty selected cases out of a series of one hundred, diagnosed in the beginning as pyelitis or pyelonephritis, but later classed as renal infection, found as possible focal areas teeth, tonsils, and gastrointestinal disturbances, such as a colitis, or duodenal ulcer. The majority of the cases were females, and in 27 of the cases the condition was chronic. Of these 27 cases, the pyelograms were normal in eight; slightly abnormal in nine, and a positive abnormal pyelogram was found in six. In discussing the treatment of these cases, he believes that pelvic lavage is the only effective method, and that the use of a bacteriophage and vaccines are useless.

Hundley, J. M. Jr. and Carson, W. J. (*J. Urol.*, Vol. xxi-341, 1929), in a report of three of their own cases of pyelitis follicularis, and a review of the literature, find that the condition has been very seldom reported. Their conclusions are that the condition is usually associated with a chronic infection of long duration, and should be treated by ureteral dilatation, kidney lavage, and removal of all foci of infection. Surgical intervention should not be thought of until all other methods of attempting to control the hematuria have been tried. The condition may be bilateral, bleeding occurring in one kidney at one time, and in the other at a later date. They suggest that the condition may

be the cause of one of the types of painless hematuria which heretofore have been described as cases of idiopathic or essential hematurias.

King, E. S. (*Arch. Int. Med.*, Vol xlii-877, 1928), in an investigation of the urea-tolerance test, as an index to renal function, found that in 65 determinations made in 27 normal subjects, there was a sharp increase in the blood urea between the first and second hours after the ingestion of the urea, followed by a gradual return to the control level at the end of fourteen hours. The maximum concentration was reached after about one hour, and was as high as 15 mgm. In the second hour, the variations were less marked. The equilibrium level was reached in the second hour, and the average level was 10.1 mgm. The rate of urea excretion was greatest when the blood concentration was highest. He puts practically no importance on the second hour reading, but does place a good deal of significance on the increase in the urea nitrogen in the blood after the 14-hour interval. In two cases of uremia, the blood urea continued to rise during the 14-hour period. This observation demonstrated the fact that the kidneys were unable to eliminate, not only the urea given, but also the urea produced by the catabolic changes in the body. In cases of acute and chronic nephritis, early and mild infections and obstructions, there was moderate retention after the 14-hour period.

Gibson, A. G. (*Lancet*, Vol ccxv-903, 1928), in a study of 114 cases at autopsy of pyelitis and pyelonephritis, divides the cases into two groups: (a) those with no obstruction to the outflow of urine, and (b) those cases with obstruction. He believes that by far the most common infection of the kidney substance in man is an infection through the blood-stream. Pyelonephritis may occur as a mild attack, which passes without notice or perhaps with only slight discomfort. There is another group in which there are moderate attacks which are attributed to what is ordinarily termed "acute pyelitis". Then there is a group of the septicemic type, where the condition becomes much more grave; and lastly, the fulminating attacks in which the kidney may become gangrenous, with resultant death of the patient. The diagnosis of atrophic pyelonephritis is given to that type of kidney inflammation which is caused by repeated attacks of pyelonephrosis. This condition may be either unilateral or bilateral. The kidney is found to be small, contracted and fibrosed. Gibson also found that in purulent and semi-purulent infections of the kidney, pyelitis was rather uncommon in the absence of obstruction, although it occurred in over fifty per cent. of the cases where obstruction was present. This fact led him to believe that many of the so-called cases of pyelitis were really cases that should have been diagnosed as pyelonephritis. The urinary sediment varies considerably in pyelitis and pyelonephritis, and frequently is of very little aid in the diagnosis.

Birkhaug, K. E. and Parlow, A. L. (*J. Urol.*, Vol. xx-83, 1928), in a study of gonococcal infections of the kidney, summarize their findings as follows. The only reliable methods of recognition of the gonococcus are cultural methods, including typical colony formation on ascitic fluid agar, inability to grow on agar or at room temperature, ability to split glucose, and inability to ferment maltose and saccharose, or by serological reactions. In the thirty-two reported cases of gonococcal infection in the kidney, only four are indisputably authentic, in that the gonococcus was positively identified culturally and by fermentation reactions. They present a new case of gonococcal hydronephrosis, the gonococcus being positively identified by all the above tests. They believe that gonococcal infection of the kidney is brought about by means of a generalized gonococcal bacteremia rather than by direct or indirect ascending routes leading from the lower genito-urinary tract into the kidney pelvis.

Randall, A. (*Ann. Surg.*, Vol. lxxxix-949, 1929), reports a case of x-ray destruction of the kidney in a man whom he operated upon two years after a previous operation for acute appendicitis. The operation became necessary on account of the persistence of symptoms in the lower abdomen. At the time of Randall's operation, a hard mass was discovered retroperitoneally, and on removal was found to be a ureteral stone. This was followed by a persistent urinary fistula. A nephrectomy was done some two months afterward, and on account of the dense adhesions present, the kidney was removed in three pieces. The urinary sinus, however, still persisted. Intense x-ray therapy was then tried over the kidney area, with a marked diminution of the secretion. Randall, in his article, reports the work of Hartman and Kline, who have caused cessation of kidney secretion by x-ray treatment.

Chevassu, M. (*Bull. et mém. Soc. nat. de chir.*, Vol. liv-900, 1928), in a study of cases of hydronephroses by ureterograms, finds that the greatest difficulty in the interpretation of these ureterograms is differentiating permanent and temporary conditions. There is nothing to show that a dilatation of the pelvis or ureter seen at one examination is irremediable. Pyelograms have shown that in spite of considerable dilatation of the renal pelvis, the kidney may function almost normally. Even if there is a certain degree of infection, disinfection of the urine and catheterization of the ureter may greatly improve the condition. He deplores surgical intervention in practically all of these cases, and he does not believe that any accurate diagnosis can be made upon any one set of plates.

URETER

Fowler, O. S. (*J. Urol.*, Vol. xxi-469, 1929), reviewing ureteral diagnostic methods, gives as his opinion that the methods in common use for the diagnosis of urethral stricture are not entirely reliable and that the treatments applied to stricture are being employed too loosely. A diagnosis of ureteral stricture made on the "feel" and the "hang" of the catheter on a single ureterogram, is based on inaccurate evidence. The ideal method of investigation would be X-ray examination following the administration of an opaque solution which would be excreted by the kidney. It would be possible by this method to determine the presence and site of an obstruction to the flow of urine without instrumental irritation. There is no ideal method at the present time by which this can be determined, but there are two solutions which may be used that are a help. The first method is to inject one kidney at a time with an opaque solution, and after the catheter has been withdrawn have a series of pyelograms taken. Fowler takes twenty minutes as an arbitrary time to determine positive retention, the normal kidney in any position having an emptying time of about one-half a minute. The second method is to study all of the urine passed in twenty-four hours, to determine when all the opaque solution has been eliminated. Sodium iodid can be identified chemically by the Carson method in a dilution of 1:10,000. The test is based on a violet color which is developed in chloroform after the addition of a special watery bromid reagent. The formula and the technique of this test are fully described in the article and are well worth investigating.

Seng, Magnus J. (*J. Urol.*, Vol. xxi-475, 1929), reports a series of cases of dilatation of the ureter and renal pelvis in pregnancy in which the urethra shows a marked congestion along with the other organs. The changes in the bladder are found chiefly in the trigone, with sometimes a distortion in the contour of the bladder. The postpartum bladder returns to normal in nine days. Seng found no evidence of insufficiency of the uretero-vesical valves in any stage of pregnancy. The congestion of the trigone is progressive, beginning early and lasting throughout, the trigone becoming broadened at the base and lengthened. The only change in the ureteral orifice noticed was their separation. Catheter specimens of the bladder urine showed a great increase in white cells, suggesting infection. Cultures made in cases of apparently healthy women showed some form of coliform bacilli. In five and one-half per cent. of the cases studied, pyelitis was present. The ureters always dilate and the dilatation manifests itself at about the eighth week, the maximum dilatation occurring after about the twenty-second week. They return to normal shortly after delivery, but remain relaxed. Multiparae show marked hydronephrosis much more frequently than primiparae. Stasis occurs on the right side more frequently than on the left. It does not develop until the twentieth week. This condition is also much more frequent in multiparae than primaparae. The author believes that the marked congestion of the uterus and adnexa of pregnancy has an obstructive influence and that the dilatation and stasis are a physiological reaction to pressure within the bony pelvis.

Papin, M. (*Bull. Soc. nat. de Chir.*, Vol. liv-1026, 1928), reports a case of ligation of both ureters relieved by operation. This was a case where a panhysterectomy was done and both ureters ligated. There was anuria for 51 hours. A laparotomy done under spinal anesthesia disclosed both ureters ligated along with the uterine arteries. After removal of the ligatures, indwelling sounds were placed in both ureters proximal to the obstruction. Urine entered the bladder almost immediately, and following an initial polyuria, the output became normal after the fifth day. There were no signs of hydronephrosis and no symptoms of nitrogen retention.

Braasch, W. F. (*J. A. M. A.*, Vol. xci-1263, 1928), finds in a study of the ureteral strictures that the existence of the wide stricture is not proven by pathological evidence. He believes that the best method of diagnosing strictures is by uretero-pyelograms and also that this method of diagnosis requires much experience in interpretation and accurate technique. Ureteral dilatation is a justifiable procedure and often gives satisfactory results. It should not be done in a tuberculous stricture. Spasm of the ureter is a frequent explanation of obscure urinary tract symptoms. This condition usually occurs in patients with functional disorders, where no apparent organic lesion can be found. He deplores repeated and long-continued dilatations of the ureter, in the absence of any evidence of abnormality in the ureterogram.

Campbell, M. F. and Lyttle, J. D. (*J. A. M. A.*, Vol. xcii-544, 1929), report a series of seventy-four cases of ureteral obstruction in infants and children. In more than fifty per cent. of the cases the obstruction was due to stricture, either intrinsic or extrinsic. The intrinsic type are best treated by cystoscopic dilatation. The causes of the intrinsic cases were renal calculi, kinks associated with renal ectopia, reduplication, abnormal insertion of the ureter, and spasms. In the extrinsic group were those obstructed by aberrant vessels, periureteral sclerosis, and tumors pressing on the ureter but not involving it.

Gouverner, R. and Marion, H. (*J. d'urol. med. and chir.*, Vol. xxvii-155, 1929), in a series of experimental sutures of the ureter in dogs, showed that there is always a dilatation of the

ureter above the suture and, also, a tendency to hydronephrosis. The condition is not caused by stricture at the site of suture, but is due to a functional disturbance in the normal peristalsis of the ureter. They found that any condition that stops the passage of the peristaltic wave has a tendency to cause a dilatation of the ureter and kidney pelvis.

Trattner, H. R. (*Arch. Surg.*, Vol. xvii-968, 1928), in a study of the ureteral activity in some pathological conditions by the graphic manometric method, describes a sensitive instrument for the study of ureteral peristalsis by means of which ureteral activity may be recorded, without obstructing the escape of urine. The method is adaptable to the unexposed human ureter as well as to the exposed animal ureter. The experiment causes very little inconvenience to the patient. The article describes in detail the instrument, its method of use and its tracings in various types of pathological conditions of the ureter. From these manometric tracings he draws the following conclusions: (a) Relief of symptoms in patients who have ureteritis or ureteral pyelitis appears to occur simultaneously with the recovery of ureteral activity. Aggravation of the disease seems to be concomitant either with ureteral hyperactivity or with the loss of peristaltic contractile ability; (b) mechanical ureteral obstruction cannot be dissociated from functional ureteral impairment, but there may be loss of function in the absence of mechanical interference; (c) these tracings are of aid in the detection of early or late disturbances of ureteral function; in the diagnosis of dilated ureter and pelvis; in the decision as to which ureter should be injected with an opaque solution, and in the determination of involvement of the ureter by tuberculosis, calculus, etc.

BLADDER

Mathé, C. P. (*Surg., Gynec. & Obst.*, Vol. xlviii-429, 1929) discusses a fatal case from air embolus following the injection of 300 c.cm. of air into the bladder. There was a hissing sound heard in the bladder for a few seconds, followed almost immediately by collapse of the patient. At autopsy, bubbles of air were found in the iliac veins, vena cavae, renal veins, and the mesenteric vessels. The lungs and right chamber of the heart contained coarse frothy air. The mode of entry was through an adenocarcinoma at the base of the bladder. Animal experimentations and autopsy on human beings have shown that death is due to the arrest of pulmonary circulation and to gaseous distention of the right heart. The tricuspid and pulmonary valves are prevented from functioning, and there is stasis in the coronary vessels. The treatment consists of immediate release of air pressure in the bladder, artificial respiration, and injection directly into the right heart of 2 c.cm. of a 1:1,000 solution of adrenalin.

Chute, A. L. (*Amer. J. Surg.*, Vol. v-217, 1928), reporting his findings in bladder tumors, feels that the small papilloma can best be treated by fulguration through the cystoscope, and that even in the multiple types it may be tried, but cystotomy should be done in all refractory cases. Bladder tumors should be watched carefully following operation for evidence of recurrence. In the larger tumors of the bladder, including the infiltrating type, partial cystectomy with a wide margin about the growth is, in his opinion, the only curative treatment. He believes that local recurrences in these cases are due to malignant tissue left at operation. Where the bladder shows a solid indurated mass, without much retention, he advises against surgical interference. Cystotomy with permanent drainage in the advanced type does give relief to the patient. By careful follow up treatment, early recurrences can be recognized and treated by fulguration. The growth in many instances can be kept in check for a long period of time.

Redewill, F. H. (*J. A. M. A.*, Vol. xcii-532, 1929), finds, in his study of cases of leukoplakia, malakoplakia, and encrusted cystitis, that they resemble each other in the form of calcium deposits and an epidermization of the mucosa. All of these cases respond well, not only to the local treatment, such as fulguration, diathermy, and ecto-antigen injections, but also the forced feedings of foods rich in vitamine A and parathyroid substance.

Aschner, P. W. (*J. A. M. A.*, Vol. xci-1697, 1928), in a study of the pathology of bladder tumors, suggests the following grouping. based on the gross and microscopic findings:

1. Papilloma. Benign. Cell uniformity and typism.
   - A. Pedunculated: (1) single, (2) multiple.
   - B. Sessile. Papillomatosis.
2. Papillary carcinoma.
   - A. Non-infiltrating: (1) scattered areas of somewhat atypical cells, (2) more diffuse and more marked atypism.
   - B. Infiltrating: (1) cells of benign type (rare); (2) cells anaplastic (a) stroma or stalk invasion, (b) submucosal base invasion, (c) muscularis and perivesical invasion.
3. Non-papillary (flat) carcinoma: (a) fibrocarcinoma (scirrhous), (b) medullary, (c) adenocarcinoma, (d) squamous, and (e) hornifying.

Kretschmer, H. L. and Barber, K. E. (*H. Urol.*, Vol xxi-318, 1929), in a review of cases of carcinoma in a bladder diverticula, find that only twenty such cases have been reported. The condition occurred in adult life. Hematuria was the chief sign, and in some of the cases there was retention of urine. Cystoscopy was the best aid in the diagnosis, where a satisfactory view of the bladder could be obtained. The diagnosis

by cystogram depended upon the presence of a filling defect in the diverticula. The treatment is radical surgery. Following operation, the duration of life was from six days to twenty-nine months. In nine of the ten cases where resection was done, the tumor recurred in the bladder.

Brown, A. (*Chir. Arch.*, Vol. xvi-40, 1928), discussing paracystitis, divides all cases studied into four groups. (1) Phlegmons of the rectus abdominus muscles and the sheaths. (2) Phlegmons of the space of Retzius. (3) Phlegmons of the paravesical connective tissue. (4) Inflammation of the retrovesical peritoneum, pericystitis. Those in group 1 are not discussed in the paper, as they constitute a separate clinical entity. He believes that general and local infections play an important part in the etiology of the disease. In two of the author's four cases the cause of the disease was grippe; in one, osteomyelitis, and in another catheterization of the bladder. In the congestive form of pericystitis, spontaneous resorption often occurs. In the sclerotic and suppurative types, abscesses develop, sometimes reaching an enormous size. The treatment in the beginning should be along conservative lines, followed later by incision and drainage.

Hirsch, E. W. (*J. A. M. A.*, Vol. xci-772, 1928), in a study of the relation of bladder pressure to bladder function, concludes that the determination of bladder pressure will aid in the diagnosis of functional and organic bladder lesions, but must be only a part of the urological examination. These determinations show the result, not the cause of the disease. In bladder disturbances in women, where there is no evidence of a lesion in the genito-urinary tract or central nervous system, and the pressure is normal, the condition in all probability is due to a psychic disturbance.

Frater, K. (*J. Urol.*, Vol. xx-317, 128), studying a series of cases of epithelial neoplasms of the bladder, finds that all of the so-called benign papillomata should be regarded as epitheliomata of low malignancy. The grading of a specimen removed by instrumentation through the cystoscope can be relied upon. Specimens reported as inflammatory tissue should be examined more than once, to be sure that they are not of the low malignant type. It is also shown by his studies that sections taken from different parts of the same tumor show no variation in the grade of malignancy.

GENITAL ORGANS

Watson, E. M. (*J. Urol.*, Vol. xxi-217, 1929), reports two cases of carcinoma of the male urethra and also a review of the literature on the subject. There are no definite symptoms. Kretschmer divides the syndrome into four stages: (1) urethral discharge with dysuria and possibly retention; (2) local tumor formation; (3) periurethral infiltration; (4) fistula formation. Operative relief is possible in a certain few cases where early bleeding is found, but in most cases the treatment is not satisfactory. The methods of treatment have been external urethrotomy, internal urethrotomy, followed by dilatation and incision and drainage of the peritoneal mass. Amputation of the penis was done in those cases where the pendulous urethra was involved. All these operations were done for symptomatic relief only.

Hirsch, E. W. (*J. Urol.*, Vol. xxi-523, 1929), demonstrated the impossibility of electrical or chemical cauterization of the urethral glands. The proof of this is shown in a series of photomicrographs, where it was impossible to pass the orifice, much less follow the ramifications of the gland. A urethral mucous gland is first shown magnified 45 diameters and a wire of natural size. Then one magnified 60 diameters with a wire of natural size, and lastly, both the gland and the wire were magnified 60 diameters.

Dean, A. L. Jr. (*J. Urol.*, Vol. xxi-83, 1929), in a study of a large number of cases of teratoid tumors of the testis, discusses the treatment especially with radium and Roentgen ray. In the examination of any scrotal tumor, teratoma of the testis should always be borne in mind and a careful palpation of the abdomen on the side of the tumor done. Surgery alone in these cases offers little. The type of tumor with its undifferentiated cellular structure is especially amenable to irradiation. The tumors lacking a malignant quality are the least radiosensitive. Given a patient with a teratoid tumor of the testis, and with no evidence of metastases, the treatment of choice is irradiation of the tumor and the abdomen on the same side with the growth. The treatment is followed in about six weeks by orchidectomy. In the preoperative treatment, the irradiation should be given in as short period intervals as the tolerance of the patient will permit. Maximum irradiation by means of a radium pack and high voltage Roentgen ray treatment is the treatment of choice for metastases.

Stone, E. (*J. Urol.*, Vol. xx-245, 1928), in studying a comparison of the results of various treatments for acute gonorrheal epididymitis, finds that expectant treatment alone is not adequate treatment. Diathermy does not relieve the pain to any extent, and so far as involution is concerned gives the poorest results. The effect of calcium chloride and gonalin and their influence on involution are questionable. Epididymotomy gives almost immediate relief and shortens the period of convalescence. Aolan, he believes, shortens the period of involution and relieves the pain. Mercurochrome also relieves the pain, but does not shorten the involution period and the patient's period of incapacity as readily as aolan.

Hinman, F. (*J. Urol.*, Vol xx-521, 1928), in a discussion of the surgical treatment of genital

tuberculosis, believes, first, that the seminal vesicles and prostate are the primary site of infection, although there is a difference of opinion among urologists as to this finding. He divides genital tuberculosis into two types: (1) that in which the more advanced or only lesion is the epididymis; (2) that in which the seminal vesicles are involved with or without epididymitis. In group one, where no active lesions are found elsewhere, epididymectomy should be done; and in the second group he advises a radical operation. In cases with active lesions elsewhere, the advisability of surgery must be determined by the activity and extent of the lesions in relation to the activity and extent of the lesions in the genital organs. All of these cases should be kept under careful observation for a long period of time.

Pelouze, P. S. (*Med. Clin. N. A.*, Vol. xii-1019, 1929), in an interesting study of the rôle of the prostate gland in the causation of remote focal infective symptoms, summarizes the etiology, pathology, diagnosis and treatment of such cases. He finds that about thirty-five per cent of adult males show infection in the prostate gland and that next to the teeth and tonsils, it is the focus of infection causing the greatest number of system symptoms of toxic absorption. Although the gonococcus organism cannot be isolated at the time of examination, the past history of the case makes it undoubtedly an infection due to an old gonorrheal condition. On the other hand, there are a large number of infections in the prostate not due to gonorrhea. In these cases there is a distinct relationship to other foci of infection, such as the teeth and tonsils, and it is far too great to be attributed to coincidence. He believes that these other foci are often the primary foci causing prostatic infection, and on account of this fact it is very difficult to clear up the prostatic condition before these foci have been removed. The type of infection, outside of the prostate, may be of streptococcic origin, while those found in the prostate are staphylococcic. He explains this difference as being due to the perverted physiology of the prostate. The long-standing infections of the prostate are due largely to poor drainage of the gland follicles. Treatment of the local condition is best carried out by gentle prostatic massage, and if the symptoms do not clear up or are not greatly improved after several weeks, he believes that the infection in the prostate is not the sole cause. If pus is still found in the prostatic secretion after three months, the patient should be given a rest from treatment for from six to eight weeks. Autogenous vaccines do not seem to be of much benefit in the treatment of these cases. Care should be taken not to overdo the local treatments as regards short intervals of time elapsing between and too forceful massage on account of aggravating the already inflamed condition. He finds that in some of the cases the damage has become so great that the gland cannot be rendered free from pus.

Henline, R. B. (*J. Urol.*, Vol xxi-27, 1929), reports a new method of paravertebral anesthesia for operations on the genito-urinary tract. Before beginning his regional injections, he gives three hypodermic injections of 1/8 grain of morphine in 2 c.c.m. of a 50 per cent. solution of magnesium sulphate with procain. These are given at half-hour intervals.

For the paravertebral anesthesia a 1 per cent. solution of procain without adrenalin is used. This solution is injected both above and below the transverse processes of the eighth dorsal to the second lumbar vertebrae. Five c.c.m. are injected above and below each nerve except in the case of the two lumbar nerves, for which 10 c.cm. are used. The ilio-inguinal and iliohypogastric nerves are injected through one skin puncture. The posterior roots of the spinal nerves are injected with a solution of procain, at or near their point of exit. Only the nerves which supply the operative field should be injected. Procain in a 1 per cent. solution causes no vaso-dilation or vaso-constriction. It is destroyed very rapidly in the liver and has no after effects, provided that sufficient time is taken in its administration. A hypodermic injection of 10 minims of a 1:1000 solution of adrenalin is given if there is any weakening of the pulse noted, and the induction of anesthesia is stopped.

MISCELLANEOUS

Hertz, J. (*B. Soc. Nat. de Chir.*, Vol. liv-934, 1928), reports a series of seven suprarenalectomies, showing the effects and results of this operation for gangrene of extremities. In five cases, the operation was performed for thrombo-angiitis obliterans, one case for senile gangrene, and one for syphilitic endarteritis. In all of the cases of thrombo-angiitis obliterans, the pain was relieved immediately. The relief, however, was only temporary. He believes the operation has the same effect as periarterio sympathectomy. In conclusion, he states that periarterio sympathectomy should be done first before suprarenalectomy. The operation relieves the arterial spasm and makes possible a more conservative amputation.

Scholefield, E. S. (*J. Urol.*, Vol. xx-345, 1928), studying the healing of tuberculous nephrectomy wounds, believes that the long, persistent sinuses found in many of these cases are due to the development of a new tuberculous process in the traumatized tissues. A study of the patient's general health before and after operation is of the greatest importance.

Walker, K. (*Brit. Med. Jour.*, Vol. ii-652, 1928), discussing the diagnosis and treatment of sterility in the male, feels that the spermatogenic function of the testis is more sensitive to external influences than its function of in-

ternal secretion. The investigation of the effects of endocrine disturbances, focal infections, and diet, is of the greatest importance.

Roantree, R. P. (*Calif. and West. Jour. Med.*, Vol. xxx-313, 1929), reporting cases of torsion of the spermatic cord, finds that it is not such a rare condition as one might believe. The diagnosis is made from the history and the physical findings. The symptoms may be mild or severe. If the diagnosis is made early and operation done at once, the testicle may be saved. He believes that the tunica vaginalis should be inverted to prevent hydrocele, and the testicle sutured to the scrotum low down to prevent recurrence.

Eisendrath, D. M. (*Minn. Med.*, Vol. xi-449, 1928), in a study of cases of anuria, divides them into three groups: (1) the obstructive type; (2) the secretory cases; and (3) those of transition or combination anuria. In the first group are included those cases of unilateral bloc by calculus, stricture, injury or neoplasm, the other kidney being normal. This group is classed as the reflex anurias. Second, unilateral bloc with congenital absence, lack of development, or complete loss of function of the other kidney, as the result of disease, injury, or operative removal. In the third, those cases of bilateral bloc due either to calculus or stricture. The secretory anurias include those due to disturbances of circulation proximal to the kidney itself and disturbances affecting the renal parenchyma. In this group are also placed the anurias following transfusion, burns, and gas bacillus infections. The symptomatology of these cases may be divided into those in which there is complete absence of symptoms until the period of tolerance has been passed, those which present only minor degrees of intolerance, and those in which the period of tolerance is very short. The interval between the time when the anuria is first noticed and the appearance of the symptoms of uremia is called by the author "the period of tolerance." This interval varies from twenty-four hours to twenty-nine days. Hiccough, nausea, vomiting, slight muscular twitching and drowsiness are all warning signals of the advent of the period of complete intolerance. A complete urological examination should be done in all cases of anuria in order to rule out the presence of obstruction due to calculus or stricture.

A QUOTATION FROM A REPORT TO CONGRESS BY SURGEON GENERAL CUMMING

As a result of more than fifteen years' experience in endeavoring to apply practical public health knowledge to the community and the home, public health authorities are agreed that the best results can be secured through the establishment of whole-time local health service in the rural sections where such work is most urgently needed. County health organizations provide the machinery through which all public health activities may be conducted in proper sequence and in proper relation one to the other, thereby insuring to communities a well-balanced, comprehensive and general program of public health work well adapted to their needs. They also afford the best practicable means for preventing the interstate and intrastate spread of disease.

During the fiscal year just completed, the Public Health Service co-öperated in 204 counties located in 17 States. At the present rate of progress, however, about 51 years will be required before all of the rural communities in the United States will be receiving adequate health service, the lack of which is now responsible for an annual economic loss of more than one billion dollars.

Satisfactory co-öperation has been received by the Service from State health departments, conservation commissions and representatives of the shellfish industry in connection with measures to insure the sanitary control of shellfish in interstate traffic. No outbreaks of disease due to infected shellfish occurred during the year.

Measures for insuring safe water and milk supplies on trains and vessels engaged in interstate traffic have been continued with cordial co-öperation from State and municipal health departments and railroad and steamship companies. Through this co-öperative procedure, a vast amount of work has been accomplished at very low cost to the Federal Government.—*United States Public Health Service.*

MAGAZINES BANNED MORE THAN $2,000,000 IN FRAUDULENT ADVERTISING LAST YEAR

Periodical publishers rejected more than $2,000,000.00 in advertising revenue this year to protect the public from fraud and deception, according to a recent announcement made by Edward L. Greene, General Manager of the National Better Business Bureau. Mr. Greene pointed out this figure was computed by the Bureau from figures submitted by forty-five magazine publishers.

"Many other magazine publishers reported the rejection of hundreds of thousands of dollars in revenue", Mr. Greene stated, "but could quote no accurate figures." Explaining the economic importance of this action by publishers, Mr. Greene stated: "Most of the frauds that prey upon the public are dependent upon advertising in one form or another, to reach their victims. Honest magazine publishers are protecting their readers from these frauds by refusing to publish fraudulent or deceptive advertising."

Publishing organizations with ethical principles wonder why so many newspapers of influence continue to take proprietary medicine advertisements which allege for the compound merit beyond reason.

Case Records
of the
Massachusetts General Hospital

ANTE-MORTEM AND POST-MORTEM RECORDS AS USED IN WEEKLY CLINICO-PATHOLOGICAL EXERCISES

EDITED BY R. C. CABOT, M.D.

F. M. PAINTER, A.B., ASSISTANT EDITOR

CASE 16031

CHILLS AND DROWSINESS

MEDICAL DEPARTMENT

A widowed American nurse twenty-eight years old entered October 24 complaining of chills and fever of two weeks' duration and pains in the arms and legs.

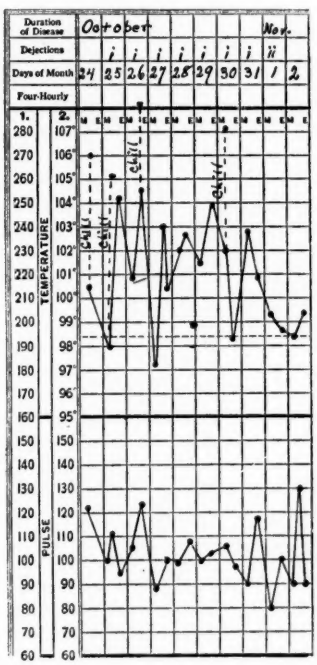
She had always been subject to sore throats. Since the death of her husband a year before admission she had not been well. At the suggestion of a doctor she went back to her work at nursing. For over a month she had had "rheumatic pains" in her arms. Three weeks before admission her tonsils were removed. She thought the "rheumatic pains" were worse after this. She continued to work until two weeks before admission. Then she had a chill and fever, was ill in bed, slept most of the time, refused to talk and appeared disoriented. In about a week she came out of this drowsy condition, but continued to have chills and fever every day followed by severe pains in her arms, neck and legs, not in the joints, relieved only by morphia. Further information was not obtainable because of her condition. She denied any intestinal or urinary disturbance.

Her past history is negative except for an operation for appendicitis and another for rupture eight years before admission.

Clinical examination showed a fairly well nourished young woman lying flat in no respiratory distress. In the course of the examination she developed a shaking chill with a temperature of 101.6°. Lips and nail beds cyanotic. Teeth: many fillings but no obvious cavities. Apex impulse of the heart not seen but felt as a moderately forceful upward thrust in the fifth space 10.5 centimeters from midsternum, 2 centimeters outside the midclavicular line. Right border 3 centimeters to the right, supracardiac dullness 5. Rhythm regular. Sounds of good quality. There was a late diastolic rumble leading up to the loud snapping first sound at the apex and a prominent blowing systolic murmur all over the precordia. The aortic second and pulmonic second sounds were distinct, the pulmonic second much accentuated and greater than the aortic second. Marked pulsation of the neck veins. A thrill was easily felt over the apex, apparently presystolic, although the time was uncertain. No capillary pulsation in the finger nails. Blood pressure 112/58. Lungs, abdomen and pupils normal. Rectal and pelvic examinations not done. Knee jerks hyperactive. Babinski positive on the right, probably false.

Urine: amount normal, specific gravity 1.012 to 1.032. Over 50 leukocytes per high power field at one of two examinations. (No catheter specimen.) Blood: hemoglobin 75 to 50 per cent, reds 4,195,000 to 3,150,000. Smear normal except that the platelets appeared decreased. Leukocytes 31,000 to 27,500, polynuclears 91 per cent. Hinton negative. Widal negative for typhoid. No agglutination with Bacterium melitensis or Bacterium abortum (the bacillus of undulant fever).

Temperature and pulse as shown in the chart. Respirations 20 to 61.



The evening of admission after examination the chill continued and the temperature rose to over 106°. The following morning she had another chill with a fever of 105° and a heart rate of 120. The first sound at the apex was very loud, sharp and snapping. The second sound could be heard at the apex and the base. There was no diastolic murmur at the base. A cardiologist found a mitral diastolic murmur in addition to the aortic diastolic.* The breathing was rapid. Pulsations were visible everywhere, even in the small artery on the lip. The pulse felt like Corrigan pulse. That day the right chest moved slightly less than the left and the right lower lobe showed diminished tactile fremitus and decreased breath sounds and voice sounds. The right side of the abdomen was held more rigid than the left and the right

*Note by Dr. William R. Jordan, senior interne on the West Medical Service: The diastolic murmur along the left border of the sternum became very marked several days after admission and remained so until death.

costal margin seemed to move less than the left. The night of October 26 the patient had a violent chill for an hour followed by delirium and a fever of 108.2°. Under morphia and alcohol sponges the temperature came down to 100.5°, then rose to 104.4° as blankets were put on. The blood pressure was 120/25, the pulse very rapid and full. The following morning she complained of numbness and pain in the right leg. There was ankle and patellar clonus on the left, ankle reduplication on the right with a normal right knee jerk. The temperature was 97° the morning of October 29. That night she had another severe chill with a fever of 107°. The next day she had much cough with foamy, bloody sputum. The chest filled with coarse râles. The respiratory rate was 50. On November 2 she died.

Clinical Discussion

BY RICHARD C. CABOT, M.D., GEORGE W. HOLMES, M.D., AND WILLIAM R. JORDAN, M.D.

NOTE ON THE HISTORY

I cannot make any reasonable guess on the basis of the history alone.

NOTES ON THE PHYSICAL EXAMINATION

Of course the lips and nail beds ordinarily become cyanotic during a chill from any cause. That has no diagnostic value as to the cause of the chill. People get extraordinarily cyanotic from malarial chill, septic chill or any other kind of chill that I know.

The "late diastolic rumble leading up to a loud snapping first sound at the apex" is the rubber stamp of a presystolic murmur of mitral stenosis, but we do not expect capillary pulsation in the finger nails with that murmur.

Will mitral stenosis account for the chills? Mitral stenosis is what the physical examination of the heart says. Must we suppose something else to account for the chills? If so, what else?

A Student: Sepsis of some kind?

Dr. Cabot: You mean abscess in the liver or something like that?

A Student: Endocarditis.

Dr. Cabot: Mitral stenosis is endocarditis. You mean acute endocarditis?

A Student: Yes.

Dr. Cabot: Acute or subacute endocarditis is the natural thing. We have a chronic stenosing lesion which often goes with an acute lesion on the same valve, causing chill. Just on the doctrine of chances, the chances are that the whole thing is in the heart. I mean on the facts I know to date.

We pay no attention to this urinary sediment because it is not from a catheter specimen.

We have a chart of the typical septic type that goes with a big abscess not drained or with subacute endocarditis, the two not being distinguishable at all from the chart.

"A mitral diastolic murmur in addition to the aortic diastolic." There must be some mistake there. We have not anything so far to suggest aortic disease.

Dr. William R. Jordan: I think there was no mistake in the observation at that time.

Dr. Cabot: Of course if you had already made a diagnosis of mitral stenosis a murmur in that position would naturally be interpreted as a Graham Steele murmur from dilatation of the conus arteriosus. It may be aortic disease. It may be where the acute endocarditis is, if it is present. But I do not know that we have any evidence of it.

Certainly capillary pulse and Corrigan pulse sound like aortic disease and do not sound like mitral.

The pulse pressure is very strongly suggestive of aortic disease.

A fever of 108.2° is a very unusual fever, but not of differential value.

Numbness and pain in the right leg make us think of peripheral embolism. That makes us think of cerebral embolism, which is very likely under these conditions. The cough with the foamy, bloody sputum makes us think of pulmonary embolism or infarct.

DIFFERENTIAL DIAGNOSIS

If I remember rightly she was drowsy before she came in here. That could be from sepsis, but I feel that cerebral embolism is also quite possible. I do not see any reason to doubt that she had both mitral stenosis and subacute endocarditis, which very likely is on the mitral or the aortic valve or both. She certainly seems to have aortic disease, on the basis of the capillary pulse and the blood pressure. So I should suppose we have both lesions; aortic and mitral, with acute endocarditis. I do not see any reason to suppose anything else except the results of that in the form of emboli. Did we get a blood culture?

Dr. Jordan: There were two blood cultures. The first showed Gram-negative cocci, unidentified. The second showed streptococcus viridans in both flasks.

Dr. Cabot: If we had merely chills and a heart lesion we should suspect acute endocarditis. With the viridans we are nearly sure of it. So we have the evidence for subacute bacterial endocarditis with I believe an old lesion at the mitral valve.

I do not know whether these films show enough to be worth while, Dr. Holmes.

Dr. George W. Holmes: The increased density of the lung fields is interesting. You notice extending outward from the root of the lung this fuzzy increase in density which gradually fades out toward the periphery of the lungs. I do not think that is all due to the quality of the films or the phase of respiration during

which the films were taken. Such an occurrence is more likely to be due to passive congestion or at least stasis. In addition to that we have the rather wide shadow across the auricles or the heart. The distance from left to right representing the diameter across the auricles seems to be a little wide and the heart seems enlarged in all diameters. Of course these films are not taken at seven foot distance and we can only guess at the size of the heart. The change might be due to bronchopneumonia or passive congestion. I think it is more likely to be passive congestion.

DR. CABOT: I always like to get the radiologic judgment on the valve affected.

DR. HOLMES: I can easily back down on this case because she did not have a heart examination. The cases which we see are usually too sick to have a satisfactory examination done. It is not a fair cross section of our work.

DR. CABOT: There is no evidence of lung abscess or a local process? We are thinking of pulmonary embolism from acute endocarditis, but have not so far as I have seen any evidence of a local embolism unless it is a softening in the brain.

DR. HOLMES: No.

BACTERIOLOGIC REPORT, OCTOBER 25

Blood culture—streptococcus viridans, both flasks.

BACTERIOLOGIC REPORT, OCTOBER 30

Sputum by mouse test—pneumococcus Type IV.

CLINICAL DIAGNOSES (FROM HOSPITAL RECORD)

Rheumatic heart disease with aortic regurgitation.
Mitral stenosis with regurgitation.
Acute bacterial endocarditis.
Bronchopneumonia.

DR. RICHARD C. CABOT'S DIAGNOSES

Chronic rheumatic endocarditis, mitral and aortic stenosis and regurgitation.
Subacute bacterial endocarditis of the mitral or aortic valve or both.
Possibly cerebral embolism.

ANATOMIC DIAGNOSES

1. *Primary disease.*

Subacute bacterial endocarditis, mitral and aortic valves.
Chronic rheumatic endocarditis of the mitral and aortic valves, slight.

2. *Secondary or terminal lesions.*

Infarcts of the spleen.
Miliary infarcts of the kidney.
Acute pleuritis with effusion.
Collapsed lungs.

PATHOLOGIC DISCUSSION

BY TRACY B. MALLORY, M.D.

She had acute bacterial endocarditis with both the mitral and aortic valves involved. I think that one point in the history is very interesting and might suggest what seems to have happened. When she first came in we have no record of an aortic murmur and the blood pressure was recorded as 112/58. Four days later they noted an aortic murmur, and near the end a blood pressure of 120/25. There was an acute perforation through one of the cusps of the aortic valve, in all probability a very acute affair, the ulcerative type of endocarditis that we sometimes see. The vegetations were very large, the largest one being on the wall of the ventricle, which is a little unusual. The evidences of old rheumatic deformity were not very marked. There was a slight old fibrosis on the mitral and aortic too, but I do not believe that until the bacterial process started there was any marked degree of stenosis or regurgitation at either valve.

She had terminal emboli to the spleen and miliary emboli to the kidneys. The pleural cavities contained a liter or more of fluid on each side, and the lungs were almost entirely collapsed as a result of that. There was a very small amount of aërated tissue left. In view of the X-ray findings I suppose that must have been a very rapid terminal event.

DR. CABOT: Was the brain opened?

DR. MALLORY: No; neither was the leg.

DR. CABOT: We may continue to think we were right about the emboli in the brain and in the leg, although the only emboli found were in the spleen and kidneys.

A STUDENT: What relation did the tonsillectomy a few weeks before admission have to the development of the acute endocarditis?

DR. MALLORY: I have no idea. The process seemed old enough to antedate the operation.

DR. CABOT: If you knew the patient had this disease and had had it more than a few weeks, you would not advise tonsillectomy.

You did not mean to negative subacute endocarditis, did you?

DR. MALLORY: I do not know how to draw any sharp border line. We usually reserve the term "acute" for staphylococcus, hemolytic streptococcus or pneumococcus endocarditis, and by subacute bacterial we almost always mean viridans. But ulceration as marked as we have here is unusual with viridans. On the whole I think it behaved more like streptococcus hemolyticus as I have seen it. It certainly was a very short and acute course for viridans endocarditis.

A STUDENT: The history here covers only a month.

DR. MALLORY: There was enough on the valves to suggest that she had had it for some time.

A STUDENT: Is there any possibility of her having had pneumonia? That would account for those films.

DR. MALLORY: I think that was accumulation of fluid. A liter of fluid in the chest would do that.

DR. CABOT: That was inflammatory fluid, not dropsical?

DR. MALLORY: I think it was dropsical.

DR. CABOT: There was no fibrin?

DR. MALLORY: No.

CASE 16032

A CASE OF PERSISTENT VOMITING WITH UNUSUAL ROENTGENOLOGICAL FINDINGS

SURGICAL AND ROENTGENOLOGICAL DEPARTMENTS

A widowed American housekeeper fifty-five years old entered October 11 complaining of vomiting of five weeks' duration.

In the spring she had an attack of influenza and since that time had felt that she was growing weaker and more easily fatigued. In May she began to be easily nauseated and to vomit. In August she stopped working to rest. Five weeks before admission she suddenly had severe nausea. She went to bed, and then vomited considerable black vomitus. The vomiting was practically continuous for two days. Since that time she had vomited about twice every day and had had practically constant sharp pain in the right upper quadrant, not shifting or radiating, aggravated by deep breathing, coughing or vomiting, considerably relieved when she lay quietly in bed. There had been constant soreness at the site of the pain. The vomitus was now green and bitter. For five weeks she had kept no food on her stomach and little fluid. She had never vomited any gross blood. For three weeks she had been constantly in bed. She had lost a good deal of weight. There had been no jaundice or tarry, bloody or clay colored stools.

Thirteen years before admission she was operated upon at another hospital. The chief complaint at that time was vague pains over the lower abdomen. At the time of operation a rather thorough examination of the abdominal viscera was negative except for a palpable mass about the size of an orange in the left lobe of the liver. Removal was impossible. A small piece was removed for microscopic examination. The abdomen was closed. Pathologic report, gumma of the liver. She made a very satisfactory convalescence.

Her family history presents stomach trouble, heart trouble and paralysis.

She had influenza eleven years before admission as well as in the spring before admission. For ten months she had had violent palpitation and marked dyspnea on moderate exertion. She also had dizziness with attacks of palpitation on exertion. Since the onset of the present illness she had been spitting up froth-like sputum after drinking.

Clinical examination showed a weak-looking woman showing evidence of rapid loss of considerable weight. A few scattered atelectatic râles. Heart sounds faint, weak and rapid. Tic-tac rhythm. An occasional premature contraction. Slight enlargement of the heart to left and right. Artery walls palpable and tortuous. Blood pressure 160/96. A well-healed upper left rectus scar and a midline lower abdominal scar. Abdomen tympanitic and tender throughout. Tenderness most marked high in the right upper quadrant near the costal margin. Liver edge just palpable, tender and possibly irregular. There was increased resistance in the epigastrium with a questionable mass that did not move with respiration. General tenderness or rather distress on pelvic as ón abdominal examination. Argyll-Robertson pupils, right greater than the left, both slightly irregular. Knee jerks hyperactive.

Blood: 16,550 to 24,000 leukocytes, polynuclears 82 per cent, hemoglobin 80, reds 4,600,000. Two Hintons negative. Non-protein nitrogen 33 milligrams. Chlorides 658 milligrams. Vomitus: guaiac positive at seven tests, negative at four. Stool: guaiac positive twice; negative three times. Van den Bergh 3.37 milligrams bilirubin per 100 cubic centimeters of blood. Gastric contents: no free hydrochloric acid, guaiac negative.

ROENTGENOLOGICAL DISCUSSION

BY AUBREY O. HAMPTON, M.D.*

At this point a tentative diagnosis of carcinoma of the stomach was made.

Examination of the stomach and duodenum was done without a motor meal in the prone position. The stomach appeared normal in outline and slightly more to the right than normal. As the barium passed through the pyloric valve it was seen to go in three different directions, first into the duodenum, second outward and upward into what appeared to be the gall bladder, and third, downward and upward into an elongated tubular structure at the point of bifurcation of the barium. The first portion of the duodenum was markedly deformed. The major portion of the barium appeared to pass in the abnormal routes instead of into the duodenum, and very shortly there was an almost complete barium outline of the gall bladder, cystic, hepatic and common ducts. The barium extended outward into the smaller ramifications of the hepatic ducts diffusely into the liver. The gall bladder was not abnormal in size. It appeared distorted and irregular and connected with the duodenal cap. At twenty-four hours a considerable quantity of barium was retained in the hepatic ducts and gall bladder.

The examination suggested a fistula between the gall bladder and the first portion of the

*Assistant Roentgenologist, Massachusetts General Hospital.

duodenum. The fact that the barium passed in two abnormal directions is difficult to explain. The gall bladder and cystic duct were definitely filled. The elongated tubular structure immediately above it which appears to conduct the barium from the duodenum is not in the usual position of the common duct. It would therefore seem that there is a second fistula tract entering the liver. The whole picture could be explained by a destructive lesion involving the

Note the apparently normal stomach, the distorted first and second portions of the duodenum, and the almost complete barium outline of the biliary tract.

gall bladder and liver, perforating into the duodenum.

Examination of the colon by barium enema. As the barium entered the rectum it was noticed that there was considerable delay at the rectosigmoid characterized by unusual dilatation of the rectum. The rectum reached about twice its normal size, but the rectosigmoid junction presented no definite irregularities or constrictions. Barium finally reached the cecum. The colon was smooth in outline. There were no filling defects or constant irregularities. The dilatation of the rectum could be due to chronic rectal stasis. There was no evidence of a fistula in the region of the hepatic flexure.

FURTHER HISTORY

During the hospital stay the temperature ranged from normal to 101°, the pulse from 76 to 121.

The patient continued to vomit daily, though less often than before admission. The pain in the right upper quadrant continued. October 27 she had a severe chill. She ate fairly well, but was drowsy and disoriented and could not sit up in bed. Early in the morning of November 13 she had severe abdominal pain, after which she gradually weakened and died.

CLINICAL DIAGNOSES (FROM HOSPITAL RECORD)

Duodenal-biliary fistula.
Tertiary syphilis.
Central nervous system syphilis.

ANATOMIC DIAGNOSES

Carcinoma of gall bladder.
Cystic-duodenal fistula.
Abscess of liver.
Chronic nephritis.

Pathologic Discussion

BY TRACY B. MALLORY, M.D.

The autopsy showed complete replacement of the gall bladder by carcinoma. In the center of the tumor mass was a cavity partially filled with necrotic material and also with what appeared to be intestinal contents. The cavity communicated directly through a fistulous opening with the first portion of the duodenum. It also penetrated the liver for a distance of 5 centimeters, and several medium sized bile ducts emptied into the cavity, as did also the cystic duct. The common bile duct and the two hepatic ducts were not involved in the tumor, but were slightly distended and the walls slightly thickened. The liver tissue itself showed two areas of metastatic carcinoma, but no evidence of hepatitis.

The remainder of the autopsy, including the head and spinal cord, showed nothing noteworthy.

Dr. Hampton: The history of an operation suggested the possibility of a cholecystoduodenostomy, but this did not explain the fact that the barium appeared to leave the duodenum by two different routes. There was also considerably more distortion of the duodenum and the cavity which was wrongly construed to be the gall bladder than is usual in the postoperative cholecystoduodenostomy. The unusual route of the barium, i.e., that it took two courses, is well explained by the demonstration in the pathologic specimen of a five centimeter fistulous tract extending into the liver together with the cavity in the place of the gall bladder.

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THE BULLARD COLLECTION

THE gathering together of a library of books printed before 1500, which would represent the medical books and those on allied subjects likely to be of use to an intelligent student-physician of the late sixteenth century, was the leading idea in the mind of Dr. W. N. Bullard when purchasing the volumes for his collection. That he succeeded, at least in part, is evidenced by the check-list compiled by Mr. Ballard of the books now in the Boston Medical Library.* There are 179 books, many of them excessively rare; superb folios, illuminated books, the first printed book containing a chapter on medicine, early works on pediatrics and surgery.

It is hoped that such a splendid collection, well started, may expand. Important additions come at once to mind; Leonicenus is represented by *De morbo gallico*, but his more important work on "The Errors of Pliny" is not found, although the collection contains Collencius' "Defense of Pliny". The *Anathomia* of Mundinus, the most popular textbook of the period, is also missing.

The collection, however, as pointed out by Mr. Ballard in the "Introduction", includes many examples of the fifteenth century dictionaries, an important asset to students of the time, and is "also strong in the philosophical field of medicine, as evidenced by the numerous texts of Albertus Magnus, Nider, Sabunde, and others, and of Aristotle and his various commentators. Of special interest are the pest tracts and the various works on witchcraft, demons, sorcery and divination". The catalogue, which contains a few annotations by Mr. Ballard, is beautifully printed by D. B. Updike.

*A Catalogue of Medical Incunabula Contained in the William Norton Bullard Loan Collection Deposited in the Boston Medical Library, Compiled by James F. Ballard. Boston, Privately Printed, 1929

A QUESTION OF ETHICS

ONE of the especially interesting features of this number will be found in the letter of the Committee on Ethics and Discipline of the Massachusetts Medical Society respecting the association of a physician with an organization very much like the Life Extension Institute.

The Committee makes clear the fact that the company advertises for business and quotes the statement of the physician in charge with respect to his interpretation of his functions.

The business of the company apparently is to examine persons and, based on this examination, give such advice as may be indicated for the guidance of the patient in dealing with abnormalities detected or methods of living which are not conducive to health.

The assumption of the medical director that this examination and advice do not constitute the practice of medicine is, we believe, at variance with the broad conception of the functions of the doctor. The idea that the practice of medicine is restricted to the treatment of a demonstrable disease is narrow and even absurd because it is generally believed that preventive medicine has accomplished even more for humanity than the wonderful resources of therapeutics, and the examination of patients for the purpose of correcting defects present or impending must be construed as practicing medicine because only educated physicians are equipped to do this work.

The question of whether the law relating to the practice of medicine controls this type of work may wait for solution by the courts, but the ethics of advertising is of major importance and should engage the thoughtful consideration of those in positions to influence the behavior of the Fellows of the Society. Intelligent laymen are watching the habits of doctors with interest and many in the profession are looking for clearer definitions of what is permissible in reports of interviews or published statements in the lay press or the use of one's name in connection with business organizations. The attitude of the committee seems to furnish quite definite conclusions in this particular instance.

If still broader conclusions and definitions are forthcoming they will be welcomed by those who wish to adopt approved customs. Until some definite standards relating to publicity by physicians are outlined confusion will exist in the minds of some well-intentioned persons.

The committee has clearly defined opinions which are in accord with the best thought in the profession and has full power to deal with the situation. The suggestion that the members of the Society give careful consideration to the whole problem will stimulate discussion and tend to crystallize opinion. We sincerely hope that the request of the Committee will bring about the object desired.

THIS WEEK'S ISSUE

CONTAINS articles by the following named authors:

PANCOAST, HENRY K. M.D. University of Pennsylvania School of Medicine, 1898. Professor of Roentgenology, University of Pennsylvania. Professor of Radiology, Graduate School of Medicine, University of Pennsylvania. He writes on: "Irradiation as a Means of Treating Cancer." Page 103. Address: University Hospital, Philadelphia, Pennsylvania.

SEYBOLT, ROBERT FRANCIS. A.M., Ph.B., Ph.D. Professor of the History of Education, University of Illinois, since 1926; Harvard University 1925-26 (first semester) and summer sessions of 1926, 1927 and 1929. He writes on: "Lithotomies Performed by Dr. Gardiner of Boston, 1738 and 1741." Page 109. Address: University of Illinois, Urbana, Illinois.

HARTSHORN, WILLIS E. Ph.B., M.D. University of Minnesota 1898. F.A.C.S. Clinical Professor of Surgery, Yale University. Chief of Surgical Clinic, New Haven Dispensary. Attending Surgeon, New Haven Hospital. He writes on: "The Surgical Clinic in the Dispensary." Page 110. Address: 67 Trumbull Street, New Haven, Conn.

SCUDDER, CHARLES L. A.B., Ph.B., M.D. Harvard 1888. F.A.C.S. Consulting Surgeon, Massachusetts General Hospital. Chairman, Committee on the Treatment of Fractures, American College of Surgeons. He writes on: "What can the Members of the New England Surgical Society do to Improve the Treatment of Fractures." Page 116. Address: 144 Commonwealth Avenue, Boston.

PATTERSON, DANIEL C. M.D. University of Maryland 1906. F.A.C.S. Attending Surgeon, Bridgeport Hospital. He writes on: "Compressed Air Rupture of Intestines." Page 118. Address: 881 Lafayette Street, Bridgeport, Conn.

WOODWARD, SAMUEL B. A.B., M.D. Harvard 1878. Ex-President, Massachusetts Medical Society. He presents: "An Argument in Favor of Vaccination with Statistics of the Incidence of Smallpox in the United States, its dependencies and Canada." Page 122. Address: 58 Pearl Street, Worcester, Mass.

HOWARD, HERBERT H. B.S., M.D. Harvard 1912. F.A.C.S. Senior Surgeon, Boston City Hospital. Consultant in Urology, Jordan Hospital, Plymouth; Somerville Hospital, Somerville; Leonard Morse Hospital, Natick and Framingham Hospital, Framingham. He writes on: "Progress in Urology, 1928-1929." Page 125. Address: 270 Commonwealth Avenue, Boston.

MISCELLANY

MASSACHUSETTS MEMORIAL HOSPITALS

The regular meeting of the Staff of the Massachusetts Memorial Hospitals was held at the Evans Memorial on Friday, December 27, 1929.

The following expression of sentiment on the death of Dr. Thomas E. Chandler was read by the Chairman of a committee consisting of Drs. Charles T. Howard, Orville R. Chadwell and Milo C. Green:

"By the death of Dr. Thomas E. Chandler the Staff of the Massachusetts Homeopathic Hospital has suffered a profound loss. Appointed to the Surgical Service at the very beginning of his professional career he quickly endeared himself to an ever widening circle of patients and friends. A man of sound judgment and skilled in operative technique for twenty-nine years he gave freely of himself and of his ability to the aid of the afflicted. Many are the lives he saved and many were the sufferers restored to health by his skill. Though his activity is halted, the results of his work live on. Every life he saved, every sufferer he restored to health, passes on and will pass on to generations yet unborn a debt of gratitude to his sympathy and skill. Surely such a life as his is assured of a very real and a very understandable type of immortality. Though he be dead, yet shall he live in the lives of those he helped. While we mourn his passing, we also rejoice and are grateful for the example of a life so full of happy accomplishment. Every one of us, older or younger, who came in contact with his energetic personality and his kindly understanding is a better man or woman because of the association.

"To Mrs. Chandler, deprived of his companionship, and to his boys, deprived of a father's counsel and comradeship, we offer our heartfelt sympathy. May the sweet memories of happy days console her and inspire his sons to a life of ever increasing service."

The scientific part of the program consisted of the following:

Dr. J. Emmons Briggs reported a case of carcinoma of the transverse colon. This patient presented symptoms referable to the upper gastro-intestinal tract and there was x-ray evidence of pathology at the pylorus. On opening the abdomen, the condition was found to be a carcinoma located in the trans-

verse colon. This was treated by resection of the colon. The patient is making a satisfactory recov ery. Dr. Briggs discussed the various methods of dealing with this condition.

Dr. C. T. Howard reported a case of a large meningocele in a four-weeks-old baby. The sac was approximately the size of the child's head and threat ened rupture warranted operation.

Dr. L. G. Howard reported a case of infantile paralysis with positive cell count which had the unusual complication of a septic hip of unknown cause. This is one of two cases which he has observed recently. He also presented a case of neglected bi-lateral club foot. This has been cured by an operation consisting of a sub-astragalar arthrodesis with lengthening of the left tendon Achilles and the extensor tendons of the toes.

Dr. A. G. Howard presented a new type of bone plate for use in the open reduction of fracture. These plates are held in place by a sub-periosteal encircling band. The use of objectionable screws is thus eliminated. Results obtained with this form of plate have been much more satisfactory than with previous types.

Dr. S. N. Vose reported a case of sarcoma of the bladder in a boy nine years of age. Complete retention of urine was the first symptom. This is one of three cases of bladder sarcoma which have been seen at this hospital during the past ten years. X-ray evidence of metastasis in the skull made it advisable to limit operative measures to a suprapubic cystostomy for drainage and electrocoagulation of the tumor.

CASE'S RHEUMATISM SPECIFIC

The Boston Better Business Bureau has distributed the report of the National Better Business Bureau in which appears a résumé of the facts respecting Case's Rheumatism Specific.

The American Medical Association published the results of its investigation of this treatment in 1924.

On August 18, 1919 a fraud order was issued against Jesse A. Case of Brockton, Massachusetts, who had been exploiting a cure for rheumatism under the name of "Case's Rheumatism Specific". This Jesse Case filed an affidavit stating that the business of selling this rheumatic treatment had been discontinued by him and would not be revived.

In 1923 Paul Case, also of Brockton, Massachusetts, who had been referred to as the son of the above named Jesse Case, was advertising a treatment for rheumatism with an ingredient called Gadoeng obtained from Java. This Case is reported to have advertised in 1929 and the Better Business Bureau after requesting specific information regarding his product was told by the advertising agency that the Post Office Department was satisfied with the business methods of the company. The National Better Business Bureau has been advised that the Post Office Department does not "place its stamp of approval on any mail order medical schemes". Since this is so the question arises as to the future attitude of the Post Office Department in this case.

OVER-CONFIDENCE IN THE USE OF THE VIOLET RAY

Dr. H. A. Nissen, in the opening lecture in the course at the Harvard Medical School, advised caution in the use of ultra-violet rays and urged judicious dependence on sunlight for which there is no equally good substitute.

He emphasized the fact that the x-ray is much better understood than the violet ray and that the latter has been given undue prominence in the armamentarium of the physiotherapist. On January 12, "Dust and Health" was considered by Prof. Philip Drinker, assistant professor of ventilation and illumination, Harvard.

The remaining lectures in this course are as follows:

January 19—"The Causes of High Blood Pressure: Its Prevention and Management," Dr. Soma Weiss, assistant professor of medicine, Harvard.

January 26—"Nerves and Nervous Diseases," Dr. Maurice Fremont-Smith, instructor in medicine, Harvard.

February 2—"Pneumonia," Dr. W. D. Sutliff, assistant in medicine, Harvard.

February 9—"Mouth Health," Dr. H. A. Kent, instructor in oral surgery, Harvard.

February 16—"Sense Organs and Sensations," Dr. Hallowell Davis, assistant professor of physiology, Harvard.

February 23—"Heart Defects in Relation to Pregnancy," Dr. B. E. Hamilton, instructor in medicine, Harvard.

March 2—"Tobacco," Dr. W. L. Mendenhall, professor of pharmacology, Boston University.

March 9—"Heart Disease in Children," Dr. P. W. Emerson, instructor in pediatrics, Harvard.

March 16—"Keeping Fit," Dr. A. V. Bock, assistant professor of medicine, Harvard.

March 23—"Cancer," Dr. Henry Jackson, Jr., instructor in medicine, Harvard.

BILL REFERRED IN EDITORIAL "LET THE NATION DEAL JUSTLY!"*

71st Congress
2d Session

S. 2720

IN THE SENATE OF THE UNITED STATES

December 13 (calendar day, December 17), 1929

Mr. Copeland introduced the following bill; which was read twice and referred to the Committee on Pensions

A BILL

Granting an increase of pension to Emily Lawrence Reed, † Carroll, and Lazear.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, that the Secretary of the Interior be, and he is hereby, authorized and directed to place on the pension roll, subject to the provisions and limitations of the pension laws, the name of Emily Lawrence Reed, widow of Walter Reed, late major and

*Page 86, issue of January 9, 1930.
†The spaces appear in the original bill.

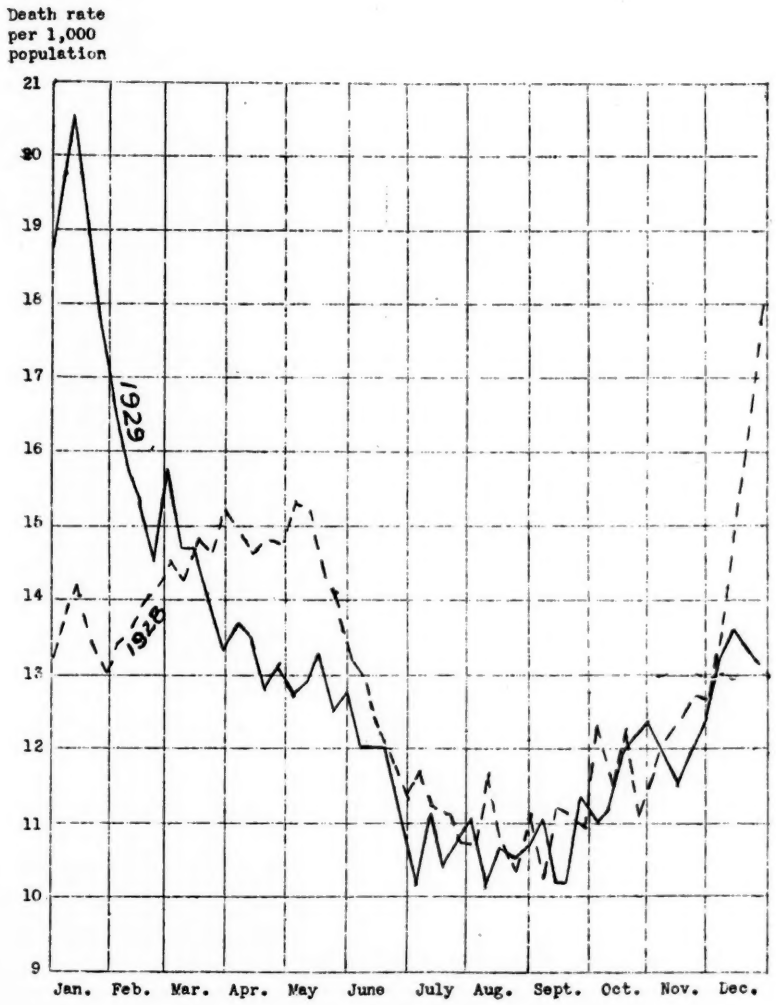
surgeon, United States Army, and pay her a pension at the rate of $250 per month in lieu of that she is now receiving.

SEC. 2. That the Secretary of the Interior be, and he is hereby, authorized and directed to place on the pension roll, subject to the provisions and limitations of the pension laws, the name of Carroll, widow of James Carroll, late major and surgeon, United States Army, and pay her a pension at the rate of $200 per month in lieu of that she is now receiving.

SEC. 3. That the Secretary of the Interior be, and he is hereby, authorized and directed to place on the pension roll, subject to the provisions and limitations of the pension laws, the name of Lazear, widow of Doctor Jesse W. Lazear, and pay her a pension at the rate of $200 per month in lieu of that she is now receiving.

SEC. 4. That these increases in pensions are made in special recognition of the eminent services of said Walter Reed, James Carroll, and Jesse W. Lazear in discovering the means of preventing, as well as the cause and method of the transmission and propagation, of yellow fever.

CHART SHOWING THE COMPARATIVE MORTALITY IN THE REGISTRATION AREA FOR 1928 AND 1929, TOTAL POPULATION 30,000,000



The annual rate for 64 cities is 12.6 for the fifty-two weeks of 1929, as against a rate of 13.0 for the corresponding weeks of 1928.

MASSACHUSETTS LEGISLATIVE NOTES

The legislative committee on State Administration has voted favorably on the bill which provides for the placing of a tablet in the State House commemorating the military service of the late Major General Leonard Wood.

House bill No. 227 is a bill providing for the administering of morphine or other narcotic drug to a convict prior to the execution of the sentence of death upon him when requested by the convict.

House bill No. 241 provides for an amendment to section 7 of chapter 24 of the General Laws to the effect that the salary of the medical adviser in the department of industrial accidents be changed to fifty-two hundred dollars a year with a definition of his duties.

Senate No. 45 provides for certain improvements at the Norfolk County Tuberculosis Hospital.

House No. 358 is an act to authorize the town of Adams to maintain a public hospital.

House No. 303 is an act relative to the correction of birth records and certain cases with respect to illegitimate children.

House No. 278 is an act governing the transfer of human bodies.

House No. 334 provides for the payment of compensation under the Workmen's Compensation Law during the entire period of total incapacity.

House No. 378 is an act relative to the repeal of provisions for waiver of compensation under the Workmen's Compensation Law.

Hearing on S. Bill No. 8 will be conducted by the Joint Judiciary Committee, January 23 in Room 222, State House.

This bill is designed to regulate the conduct of physicians and also to extend the statute of limitations with respect to suits against physicians.

CORRESPONDENCE

AN EXPLANATION OF THE USE OF A MORTALITY CLASSIFICATION BY THE STATE DEPARTMENT OF PUBLIC HEALTH

The Commonwealth of Massachusetts
Department of Public Health
State House, Boston

January 8, 1930.

Editor,
NEW ENGLAND JOURNAL OF MEDICINE:

We note in your editorial entitled "Death at Birth" in the December 19th issue the statement that:

> "It is also unfortunate that the Massachusetts Board of Health classification of Cesarian section as a cause of death, is quoted. This classification is as illuminating as classifying amputation of the toe for gangrene as a cause of death, when the surgeon ought to have amputated through the thigh. Death following Cesarian section is usually due to sepsis (although sometimes not so reported), and not to the operation itself."

In connection with this I am enclosing a copy of a letter which we are sending to the *Outlook* which carried the article around which your editorial was written.

In any studies which we make on maternal and infant deaths we of course use the International Classification of Causes of Death. As anyone knows who has had anything to do with this complex matter, all classifications are open to some criticism. However, in order that our data may be comparable with that collected elsewhere it would seem to us the height of stupidity not to use this classification and your criticism therefore should be directed against the classification rather than against the Department.

Yours truly,
GEORGE H. BIGELOW, M.D.,
Commissioner of Public Health.

COPY OF THE LETTER OF DR. BIGELOW TO THE EDITOR OF THE OUTLOOK

January 6, 1930.

To the Editor of
The Outlook and Independent,
120 East 16th Street,
New York, N. Y.

Dear Sir:—

In the issue of *The Outlook and Independent* for November 14, 1929, an article by Helena Huntington Smith, entitled "Death at Birth", contains the following statement:

> "The records of the Massachusetts Board of Health show that Caesarean section has taken second place away from convulsions as a cause of death in childbirth".

We do not know how this information was obtained but as it is totally incorrect, we feel sure that you would wish to make a note in regard to it.

For the years 1922-1928 inclusive, the primary causes of maternal deaths in Massachusetts have been first, puerperal septicemia; second, convulsions and albuminuria, while maternal deaths following cesarean section are in the sixth place on the list.

We trust this information will be of interest to you.

Very truly yours,
GEORGE H. BIGELOW, M.D.,
Commissioner of Public Health.

THE COMMITTEE ON ETHICS AND DISCIPLINE OF THE MASSACHUSETTS MEDICAL SOCIETY PRESENTS AN IMPORTANT PROBLEM FOR DISCUSSION

Boston, Massachusetts.
January 9, 1930.

To the Editor,
NEW ENGLAND JOURNAL OF MEDICINE,
Boston, Massachusetts.

Sir:

The manners, customs and habits of human society are in a state of flux, as they have been, presumably, since the dawn of creation. Doubtless most change has been in the right direction, but experience has shown that all change is not progress. It is often difficult for bodies entrusted with the duty of regulating manners to decide whether it is better to hold fast that which has proved to be good in the past, or to endorse new proposals. Here is a case in point for the Fellows of the Massachusetts Medical Society to think over and discuss.

Complaint was made to the Committee on Ethics and Discipline, last May, of the activities of an organization called "The National Better Health Bureau" of Providence, R. I. which described itself as "A Scientific Bureau, organized as a humanitarian semi-philanthropic organization upon a business basis". Its Health Director was our justly respected Fellow Dr. William R. P. Emerson* of Boston, and with him were associated other (no less respected) Fellows of our Society, and certain physicians of Providence, members of the Rhode Island Medical

*Dr. Emerson wishes to have his name used.

Society. Severe criticism of the undertaking was expressed by the physicians of Providence; an invitation to Dr. Emerson to address the Providence Medical Association on the subject was withdrawn, and local physicians associated with the Bureau were urged to sever their connection on the ground that it was unethical.

Investigation by the Committee on Ethics and Discipline showed that the National Better Health Bureau (let us call it the "Bureau" for short) was organized by three business men, one of them lately in the insurance business, who conceived the idea of "selling health diagnosis and health service at a fair cost". A corporation was formed, quarters were secured and Dr. Emerson was engaged at a salary as Health Director. An aggressive advertising campaign for patients was launched, consisting of advertisements in the daily press, often pictorial in character, extolling the importance of health, offering: "First, a complete and thorough Health Survey . . . a Health Diagram, followed by a sound practical Health program suited to the individual requirements of each youngster . . . and a special yearly health service at a special price", and describing the spaciousness and conveniences of the Bureau's quarters. To most of these advertisements was suffixed the name of Dr. Emerson as Health Director. In addition, circulars were distributed, a house to house canvass conducted, an automobile sent about the streets of Providence and a radio broadcast established in which the Health Director's success in promoting the health of Dartmouth College athletic teams was noted. These details are given to show that scarcely any of the practices common to commercial advertising were omitted, and that the Bureau saw the wisdom from a business point of view of capitalizing Dr. Emerson's high reputation.

Dr. Emerson believed that he could avoid possible criticism by not administering treatment of any sort and by not referring patients to any special group of consultants for treatment of any pathological conditions discovered, but counselling them to call in their regular advisers. As evidence of the actual benefits accruing to the physicians of Providence through the activities of the Bureau, Dr. Emerson calculated that the first hundred patients applying for "health diagnosis" may theoretically have paid fees totalling $5000 to their physicians, if they carried out the recommendations of the Health Director.

In conferences with the Committee on Ethics and Discipline Dr. Emerson stoutly maintained that "Health Diagnosis" is an activity quite distinct and apart from the functions of the practicing physician (which apparently should be confined to the treatment of disease) and declared that methods of publicity and self-advertisement intolerable if practiced by a regular physician are commendable and desirable if used by a physician who makes his living by practicing "Health Diagnosis". To quote him: "The question of advertising in Health Diagnosis work is quite different from the question of advertising in medicine; . . . it seems to me that the whole matter rests on the question of what distinction there is between health work and medical work". And he adds: "There seems to be a feeling abroad that the physician resents health work".

The Committee on Ethics and Discipline unanimously reached the conclusion that the National Better Health Bureau was a commercial organization incorporated by business men for profit and securing patients by publicity and advertising methods which offered unfair competition to reputable physicians to whom the advertising columns of the lay press are not open. They were entirely unable to see any essential distinction between "Health Diagnosis" and regular medical practice. They pointed out that every general practitioner is, or should be, not indeed a national but rather a local "Better Health Bureau" and that the Bureau's own definition of itself as a "Scientific Bureau, organized as a humanitarian, semi-philanthropic organization upon a business basis" is justly applicable to the regular physician. They felt that every conscientious physician assays the health of his patients, considers their conditions of life, their habits and conditions of work, of play and of repose, their habits of eating, of thinking, of exercising, of resting, of emotional feeling, of defecating,—in short all those factors especially claimed by Dr. Emerson as the peculiar property of the health diagnostician. The Committee expressed their view to Dr. Emerson and his colleagues with every assurance of their realization of the single-mindedness and purity of their intentions. His colleagues have severed their connection with the Bureau but, if the Committee understands the situation correctly, Dr. Emerson has not yet done so:—very likely because he thinks it unnecessary inasmuch as the Bureau has closed its doors. It seems evident, however, that Dr. Emerson is unconvinced.

This problem is typical of those which are becoming more and more frequent at the deliberations of the Committee on Ethics and Discipline. The present age of publicity, advertising, of efforts to promote the health of the people by public or quasi-public agencies such as Boards of Health, insurance companies, industrial clinics, school clinics, charitable hospital clinics, and by radio broadcast health talks, tend more and more to attract patients from the office of the regular general practitioner, and in some instances to advertise a physician or group of physicians who are the instruments of these agencies. As a whole these efforts appear commendable when directed by regularly organized charitable agencies. What shall be our attitude about Dr. Emerson and the National Better Health Bureau?

The Committee on Ethics and Discipline is the servant of the organized regular physicians of Massachusetts, charged with the duty of interpreting the ethical professional standards adopted by those physicians. These problems are becoming acute. Let us have discussion and guidance.

DAVID CHEEVER,
Chairman, Committee on Ethics and Discipline,
Massachusetts Medical Society.

COMMENT ON THE RE-REGISTRATION OF PHYSICIANS

January 8, 1930.

Editor of the NEW ENGLAND JOURNAL OF MEDICINE:

One objection to the proposed annual registration of physicians is the additional inconvenience which is likely to result from not thinking the project through and not providing the machinery for making re-registration easy. My experience with the recently discussed registration in accordance with the regulation of 1917 illustrates what I mean.

I was able to recall that at some time since I received a license to practice medicine in Massachusetts I had gone somewhere with some sort of framed certificate under my arm and had shown it to some sort of official person.* But I had no clear recollection that I had specifically conformed to the regulation of 1917. On telephoning to the office of the City Clerk of Boston recently I was informed that inquiries of the nature of mine were not answered by telephone and that I would have to inquire in person at the office. So I wrote a letter enclosing a stamped and directed envelope and received a reply in due time that I had registered in 1917 but "if you have changed your location it will be necessary for you to call at this office in order to file for your new location."

This regulation is so self-evidently what it is that it needs no characterization. It is just what is likely to happen.

Yours sincerely,

STEPHEN RUSHMORE.

OBITUARY

THOMAS EVANS CHANDLER

Dr. Thomas Evans Chandler died suddenly at his home, 117 Clinton Road, Brookline, Mass., on December 2, 1929, from heart disease.

He was born in Brownsburg, Indiana, on July 21, 1871, the son of William Edmond and Margaret Stott Chandler; a direct descendant of Dr. Thomas Chandler of Philadelphia, who received his degree from the University of Pennsylvania in 1812.

Dr. Chandler received his early education and preparation for the study of medicine in Indiana and came to Boston and matriculated in Boston University School of Medicine in 1896. He received his degree of doctor of medicine in 1900. After graduation, he became interne in the Massachusetts Homeopathic Hospital, where his ability was quickly recognized and he received an appointment as second assistant surgeon; two years later, he was advanced to the rank of visiting surgeon and soon thereafter promoted to the position of surgeon.

Dr. Chandler, early in his career, became intensely interested in surgery and never deviated from the path which led him directly to the goal of his ambition. Quickly did he gain the respect and confidence of his colleagues and his rise was phenomenally rapid. No powerful influences contributed to push him forward. He stooped to no unethical practices. He was honest and upright in his dealings with his professional associates and with his patients. He richly deserved the full measure of confidence and respect which was bestowed upon him. His surgical judgment was excellent, his manual dexterity exceptional, his capacity for hard work unexcelled. He possessed a strong personality which quickly inspired confidence. He made decisions rapidly and carried forward his convictions without hesitation and with commendable determination. It would be difficult to find a physician more devoted and enthusiastic in his professional work. For twenty-seven years, he gave his services day and night without adequate rest and with few vacations. It is probable that his zeal and over-work contributed to his sudden and untimely death.

In the midst of a busy and lucrative surgical practice, he enlisted in his country's service, leaving his wife and three children. He was appointed head of the surgical section of the unit formed by the Massachusetts Homeopathic Hospital, which later was designated as Base Hospital 44.

He was very active in the development of the organization and from the date of his call to active service in April, 1918, until the unit left America in July, was stationed at Camp Dix, N. J. While in France, Dr. Chandler's surgical work in the Mesves Hospital Centre and as head of a surgical team in the advanced sector, was recognized as of the highest order. Following the armistice, he was appointed in command of a base hospital, which he eventually demobilized in America in May, 1919. Dr. Chandler later formed Evacuation Hospital No. 5 in connection with the organized reserves, becoming its commanding officer with the rank of lieutenant colonel, and serving until the expiration of his time limit last June.

Dr. Chandler was a fellow of the American College of Surgeons, member of the American Medical Association, the Massachusetts Medical Society, The Boston Surgical Society, New England Medical Society, Boston Chamber of Commerce and Phi Chi Medical Fraternity. He was associate professor of surgery in Boston University School of Medicine, surgeon at the Massachusetts Homeopathic Hospital, Consulting Surgeon Winchester Hospital and Melrose Hospital and a member of the Executive Committee of the Massachusetts Homeopathic Hospital and of the University Club.

In 1907, he married Miss Lesley Hill, a graduate of Kansas State University. He is survived by his widow and three sons, Thomas Evans, a sophomore in Williams College; Marvin, a sophomore in Dartmouth, and Edward, a junior in the Brookline High School.

J. EMMONS BRIGGS,
477 Beacon Street.

NEWS ITEMS

THE LOWELL LOCAL ISOLATION HOSPITAL MAY HAVE TO IMPROVE ITS SERVICE—The report of a conference of the local health officers with the State Commissioner of Health indicates that the Lowell officials will have to make certain changes

in order to secure the appropriation of $12,000 a year for the local Isolation Hospital.

THE MAJORITY OF DEATHS ARE SUPPOSED TO BE PREVENTABLE—Dr. Herbert L. Willet, Jr., Associate Director of the Gorgas Institute, has been quoted as saying that sixty-one per cent. of deaths are due to preventable diseases.

If so, we are foolishly indifferent to the greatest problem of existence.

NEW YORK WILL FOLLOW BOSTON'S LEAD—Announcement has been made that the proposed Gotham hospital will develop a service similar to that provided under the plan of the Massachusetts General Hospital for a department designed to meet the needs of persons of moderate means.

Boston may be congratulated in having Dr. Frederic A. Washburn and the Massachusetts General Hospital.

SUSPENSION OF THE REGISTRATION OF DR. WILLIAM J. MACDONALD—A hearing was given Dr. William J. Macdonald of 270 Commonwealth Avenue, Boston, by the Board of Registration in Medicine on January 9 at 11:30 A. M. and after consideration of the facts, the Board found that the testimony submitted by Dr. Macdonald in court was of a nature which might have led the jury to an incorrect conclusion concerning the matter at issue. The Board then voted to suspend his registration as a physician in Massachusetts for one month.

NOTICE

ANONYMOUS LETTERS

The JOURNAL continues to receive anonymous letters which we do not publish; first, because it is the general custom of journalism not to publish anonymous letters and second because we have very definite feelings of disapproval of the behavior of any person who tries to use influence without being willing to append his name.

REPORTS AND NOTICES OF MEETINGS

AMERICAN COLLEGE OF SURGEONS, NEW ENGLAND SECTIONAL MEETING

The New England Sectional Meeting of the American College of Surgeons was held at the Bancroft Hotel, Worcester, January 6 and 7, Dr. Daniel F. Jones of Boston presiding. Among the speakers were Dr. George W. Crile of Cleveland, Dr. Edward P. Richardson of Boston, Dr. Samuel C. Harvey, professor of surgery at Yale, Dr. Michael F. Fallon, surgeon-in-chief of St. Vincent Hospital, Worcester, Dr. Robert B. Greenough of Boston, Dr. Malcolm T. MacEachern, director of hospital activities of the American College of Surgeons, Dr. Willis C. Campbell of Memphis, Tennessee, Herbert L. Willett, Jr., of Washington, and Dr. Robert Jolly, superintendent of the Baptist Hospital of Houston, Texas.

The following state executive committees were elected, the officers for the states of Massachusetts and Rhode Island being re-elected:

Massachusetts: Daniel Fiske Jones of Boston, chairman; Ernest L. Hunt of Worcester, secretary; Philemon E. Truesdale of Fall River, counselor. *Rhode Island:* Frederick V. Hussey of Providence, chairman; Charles O. Cooke, Providence, secretary; Arthur T. Jones of Providence, counselor. *Connecticut:* H. B. Lambert of Bridgeport, chairman; C. L. Larkin of Waterbury, secretary; Samuel C. Harvey of New Haven, counselor. *Maine:* C. M. Robinson of Portland, chairman; P. W. Davis of Portland, secretary; W. L. Haskell, Lewiston, counselor. *Vermont:* Allan Davidson of St. Albans, chairman; F. J. Harley of Bennington, secretary; G. R. Anderson of Brattleboro, counselor. *New Hampshire:* E. B. Eastman of Portsmouth, chairman; Emery M. Fitch of Claremont, secretary; George C. Wilkins of Manchester, counselor.

MONDAY, JANUARY 6, 1930

Registration and Information
Bancroft Hotel

CLINICS—8:00-11:00 A. M.

HOSPITAL STANDARDIZATION CONFERENCE

Bancroft Hotel—9:30 A. M.-12:00 Noon

Round Table Conference and Discussion of Administrative Problems. Conducted by Malcolm T. MacEachern, M.D., Chicago; Director of Hospital Activities, American College of Surgeons, and Robert Jolly, Houston; Superintendent, Baptist Hospital.

This session was devoted to discussion of problems as outlined in the Round Table Conference program. In addition, an opportunity was afforded all present to discuss special problems pertaining to their respective institutions and not included in the program.

CLINICAL ADDRESS AND DEMONSTRATION

Bancroft Hotel—11:30 A. M.-12:30 P. M.

Management of Fractures. Willis C. Campbell, M.D., Memphis, Member, Fracture Committee, American College of Surgeons.

Buffet Luncheon, 12:45-1:45, Bancroft Hotel

HOSPITAL STANDARDIZATION CONFERENCE

Bancroft Hotel—2:00-4:30 P. M.

ANNUAL MEETING

Bancroft Hotel—4:30-5:00 P. M.

Fellows of the American College of Surgeons—Election of Officers.

Dinner, 6:15—Bancroft Hotel

COMMUNITY HEALTH MEETING

Bancroft Hotel (Ballroom)—8:00-10:00 P. M.

Daniel F. Jones, M.D., Boston, Presiding

Welcome. The Honorable Michael J. O'Hara, Mayor of Worcester.

The Medicine of the Future. George W. Crile, M.D., Cleveland, Chairman, Board of Regents, American College of Surgeons.

The Crippled Adult. Willis C. Campbell, M.D., Memphis, Professor of Orthopedic Surgery, University of Tennessee College of Medicine.

Preventive Medicine from the Standpoint of the Layman. Herbert L. Willett, Jr., Washington, D. C., Associate Director, Gorgas Memorial Institute.

The Control of Cancer. Robert B. Greenough, M.D., Boston, Assistant Professor of Surgery, Harvard Medical School, and Chairman of the Committee on the Treatment of Malignant Diseases, American College of Surgeons.

Consider the Hospital. Robert Jolly, Houston, Superintendent, Baptist Hospital.

Motion Picture Film—"Acute Appendicitis." Presented by Malcolm T. MacEachern, M.D., Chicago, Associate Director, American College of Surgeons, and Director of Hospital Activities.

TUESDAY, JANUARY 7

CLINICS—8:00-11:00 A. M.

HOSPITAL STANDARDIZATION CONFERENCE

9:30 A. M.-12:00 Noon and 2:00-4:30 P. M.

Demonstrations and Round Table Conferences dealing with various phases of Hospital Administration and Hospital Standardization. Conducted by Malcolm T. MacEachern, M.D., Chicago; and Robert Jolly, Houston; assisted by the superintendents and staffs of hospitals.

CLINIC AND DEMONSTRATION ON CANCER

Bancroft Hotel—11:30 A. M.-12:30 P. M.

The Treatment of Cancer of the Breast. Robert B. Greenough, M.D., Boston, Chairman, Committee on the Treatment of Malignant Disease, American College of Surgeons.

Buffet Luncheon, 12:45-1:45—Bancroft Hotel

SCIENTIFIC MEETING

Bancroft Hotel—2:00-4:30 P. M.

The Influence of the Thyroid, the Adrenals and the Nervous System on the Production and Treatment of Peptic Ulcer. George W. Crile, M.D.. Cleveland, Chairman, Board of Regents, American College of Surgeons.

Present Day Obstetric Practices. John O. Polak, M.D., Brooklyn, Professor of Obstetrics and Gynecology, Long Island College Hospital.

The Treatment of Cancer of the Colon. Edward P. Richardson, M.D., Boston, John Homans Professor of Surgery, Medical School of Harvard University. Discussion opened by William F. Verdi, M.D., New Haven, Clinical Professor of Surgery, Yale University Medical School.

Pre-operative and Post-operative Treatment. Samuel C. Harvey, M.D., New Haven, Professor of Surgery, Yale University School of Medicine. Discussion opened by Frederick B. Sweet, M.D., Springfield, Mass., Surgeon, Springfield Hospital.

The Husbandry of the Hospital. Michael F. Fallon, M.D., Worcester, Surgeon-in-Chief, St. Vincent Hospital.

Motion Picture Films. This was a showing of both talking and silent motion picture films that have been produced under the supervision of the Board on Medical Motion Picture Films of the American College of Surgeons. Bowman C. Crowell, M.D., Chicago, Associate Director, American College of Surgeons, and Director of Clinical Research.

HARVARD PRIVATE HOSPITAL
81 Chatham Street
Service of Dr. Edward H. Trowbridge
Program for January 7, 1930

8:30 A. M.—Appendectomy—using electro-surgical knife, Bovie unit.

10:00-11:00—Movie film showing use of electro-surgical knife in abdominal and breast operations. Demonstration of unit and cases.

FAIRLAWN HOSPITAL
May Street
Program for Tuesday, January 7, 1930
Operations
Dr. Royal P. Watkins

9:00—Gastric Ulcer—Ethylene by Dr. Hart.
9:45—Cholecystitis—Ethylene by Dr. Hart.

ST. VINCENT HOSPITAL
Vernon Street
Program for January 6, 1930
Operations
Dr. M. F. Fallon and Associates—8:15

Thyroid (Adenoma). Anaesthesia—Amytal.
Gall-bladder.
Appendix.
Gall-bladder. Anaesthesia—Amytal.
Cervix. Anaesthesia—Amytal.

Dr. John W. O'Meara—8:30

Congenital Torticollis—Myotomy.

Program for Tuesday, January 7, 1930

Operative Clinic—Dr. M. F. Fallon—8:30 A. M.

Appendix. Amytal Anaesthesia.
Hernia. Amytal Anaesthesia.
Cervix—Radium. Amytal Anaesthesia.

Dry Clinic—10:00 A. M.

Carcinoma of Rectum. Dr. M. F. Fallon.
Gastric Ulcer. Dr. J. C. McCann.
Intra-trochanteric fractures of the femur. Dr. J. W. O'Meara.
Medical Complications of Surgical Cases. Dr. J. J. Dumphy.
Gastrointestinal and Gall-bladder Demonstrations. Dr. A. E. O'Connell.

WORCESTER CITY HOSPITAL
Jacques Avenue
Program for Monday, January 6, 1930
Winslow Surgery
(1) *Operations*

8:00—Supra-pubic Prostatectomy. Dr. O. D. Phelps.
8:00—Gastric Ulcer. Dr. William E. Denning.
8:30—Cancer of Colon. Dr. E. L. Hunt.
10:00—Pelvic Tumor. Dr. Hunt or Dr. Denning.
10:30—Appendicitis. Dr. J. F. Curran.

(2) *Demonstrations*

8:15—Multi-stage operation for Cancer of Colon. Dr. E. L. Hunt.

10:10—Cancer of Thyroid. Dr. R. P. Watkins.

10:20—Pott's Fracture, ambulatory treatment. Dr. J. P. Mulhern.

X-ray Department

Demonstrations. Interesting films illustrative of cancer and gall-bladder disease. Dr. P. H. Cook.

Orthopedic Department

Dry Clinic, 9:30—Ward rounds with demonstration of cases of fractures, bone tumors, osteomyelitis of spine, spondylolisthesis. Drs. Perkins, Mulhern, O'Meara, Givan.

Urological Department

9:00—Ward rounds, x-ray demonstrations.

10:00—Cystoscopic examination. Dr. O. D. Phelps.

Program for Tuesday, January 7, 1930

Operations

8:15 A. M.—Cancer of Stomach. Ant-gastro-enterostomy. Dr. W. E. Denning.

8:30—Displaced semilunar cartilage, Arthrotomy. Dr. R. S. Perkins.

9:15—Cholecystectomy. Dr. B. F. Andrews.

10:00—Prolapsed uterus, Mayo operation. Dr. E. L. Hunt.

10:00—Herniorrhaphy—spinal anas. Dr. B. F. Andrews.

11:00—Cholecystectomy. Dr. E. L. Hunt.

Demonstrations—If time

Cancer of Colon, Embolic ulcers of stomach, Obturator obstruction from gall stones, Familial occurrence of Gastric ulcer. Drs. Hunt, Boyden, Curran, Goodale.

X-ray Department

Interesting films. Dr. M. H. Langill.

Urologic Department

9:30—T. B. of kidney—Cystoscopic and other diagnostic methods. Dr. W. D. Bieberbach.

WORCESTER HAHNEMANN HOSPITAL
Lincoln Street at Brittain Square

Program for January 6, 1930

Dry Clinic

1. Dr. Ljungberg. Hernia.
2. Dr. Felton. An unusual case of Large Spermatocele.
3. Dr. Melick, Dr. Croissant, Dr. Jordan. Toxic optic Neuritis in a pregnant woman.
4. Dr. Felton. Bilateral Renal Calculi in young people (4 cases).
5. Dr. Melick. Repair of old Perineal lesions immediately after Delivery.
6. Dr. Croissant. Radical operation for Mastoiditis.
7. Dr. Ljungberg. Traumatic Appendicitis.
8. Dr. Marsh. Hyperthyroidism.
9. Dr. Fisher. Appendicostomy as a safety valve after Ileo-sigmoidostomy.

Program for Tuesday, January 7, 1930

Operations

8:00 A. M.—Exploratory, probably Gall-bladder. Dr. E. A. Fisher.

8:00—Cervical Adenitis. Dr. A. P. Lachance.

9:00—Hysterectomy. Dr. A. W. Marsh.

9:00—Hernia. Dr. D. G. Ljungberg.

10:00—Hysterectomy. Dr. E. A. Fisher.

10:30—Removal of loose bodies in knee joint. Dr. R. S. Perkins.

10:30—Cystoscopy. Dr. L. M. Felton.

11:30—Plastic Operation on Mouth. Dr. D. G. Ljungberg.

11:30—Epididymectomy. Dr. L. M. Felton.

A new section of this Hospital has just been completed and was open for inspection.

THE MEMORIAL HOSPITAL
119 Belmont Street

Program for January 6, 1930

Operations

(a) Main Surgery

8:15—Dr. C. T. Smith. Bilateral Inguinal Herniorrhaphy.

9:00—Dr. B. C. Wheeler. Cystoscopy—Renal tuberculosis.

9:30—Dr. C. E. Ayers. Lumbo-sacral Fusion for Spondylolisthesis.

(b) Sawyer Surgery

8:30—Dr. F. J. Berney. Five Tonsillectomies.

Dry Clinic Program

9:00—Dr. W. C. Seelye. Bilateral Renal Calculi: Chronic Obstruction of the Colon (3 cases).

9:30—Dr. J. W. O'Connor. Uterine Fibroids Complicating Pregnancy and the Puerperium.

10:00—Dr. C. T. Smith. Injection Treatment of Varicose Veins.

10:30—Dr. B. H. Alton. Actinomycosis of Lungs and Caecum.

Program for Tuesday, January 7, 1930

Operations

8:00 A. M.—Cholecystectomy. Dr. W. C. Seelye.

9:00—Cholecystectomy. Dr. W. C. Seelye.

9:30—Lumbo-sacral fusion for congenital deformity of 5th lumbar vertebra. Dr. C. E. Ayers.

10:00—Cholecystectomy. Dr. B. H. Alton.

10:30—Recto-vaginal fistula. Dr. W. C. Seelye.

11:00—Sub-astragaloid arthrodesis for rigid valgus of lt. foot. Dr. C. E. Ayers.

Dry Clinics

9:00—Chronic pyelonephritis in children. Drs. C. A. Sparrow, B. C. Wheeler.

9:30—Uterine fibroids complicating pregnancy and puerperium. Dr. J. W. O'Connor.

10:00—(1) External hydrocephalus. (2) Traumatic paraplegia. Dr. B. T. Burley.

10:30—Injection treatment of varicose veins. Dr. C. T. Smith.

11:00—Demonstration of dissections of Lumbosacral region. Dr. C. E. Ayers.

ESSEX SOUTH DISTRICT MEDICAL SOCIETY

The regular meeting of the Essex South District Medical Society was held January 8, 1930, at Beverly Hospital, with the following program:

Clinic at 5:00 p. m.

Dr. Odeneal

1. Use of lipiodol in sinuses (x-ray)
2. Mastoiditis (2 cases)

Dr. Parkhurst

1. Obstruction to the cardia in infant
2. Pregnancy and glycosuria
3. Fever and hemiplegia in man of 58 years with autopsy findings

Dr. Johnson

1. Carcinoma of sigmoid (4 cases)
2. Epithelioma (type 1) pelvis of left kidney
3. Hypernephroma of right kidney with metastases to lung and liver
4. Prostatic obstruction (2 cases)

Dr. Branch

Talk on "Importance of post mortem examination"

Dinner at 7:00 p. m.
Speaker—Dr. Harry H. Germaine, of Boston.
Subject—"Some Aspects of Cancer of the Sigmoid" illustrated with lantern slides.
Attendance 57.

WM. T. HOPKINS, *Reporter.*

MASSACHUSETTS SOCIETY OF EXAMINING PHYSICIANS

The Midwinter Meeting of the Massachusetts Society of Examining Physicians was held at the Copley Plaza Hotel on Wednesday, January 15, at 6:30 P. M.

Subjects:

1. Advantages of the State Fund. Martin T. Joyce, Esq.

Disadvantages of the State Fund. E. C. Stone, Esq.

Discussion: Where does the Doctor fit? Opened by Dr. Francis Donoghue.

2. The Modern Treatment of Cerebro-Spinal Injuries. Dr. John S. Hodgson, Massachusetts General Hospital.

Discussion opened by Dr. Henry C. Marble.

WM. P. COUES, M.D., *Secretary.*

THE DELTA SIGMA THETA FRATERNITY

The Delta Sigma Theta Fraternity of Tufts Medical School held a meeting Thursday, January 9, at 481 Beacon Street.

Dr. Maxwell Bloomberg, Tufts Medical 1924, addressed the chapter on Industrial Medicine in Relation to Orthopedics.

The rites were given to the new members admitted at the last meeting.

The officers of the fraternity are:

Chancellor: Max Gross, 1930, Jersey City, N. J.

Vice-Chancellor: Max M. Goldstein, 1931, Dorchester, Mass.

Treasurer: Alexander N. Fisher, 1931, Dorchester.

Scribe: Benjamin B. Lennon, 1932, Dorchester.

NEW ENGLAND WOMEN'S MEDICAL SOCIETY

The fifty-second annual meeting of the New England Women's Medical Society is being held at the Copley Plaza Hotel this Thursday the sixteenth of January with a dinner at 6:30 P. M. Speakers: Dr. George H. Bigelow, Commissioner of Public Health, and Dr. Agnes C. Vietor.

THE SOUTH END NEIGHBORHOOD MEDICAL CLUB

The next regular meeting of the South End Neighborhood Medical Club will be held at the office of the Boston Tuberculosis Association, 554 Columbus avenue, Boston, on Tuesday, January 21, 1930, at 12 noon.

The speaker will be George R. Minot, M.D., S.D., Professor of Medicine, Harvard; Director Thorndike Memorial Laboratory, Boston City Hospital. His subject will be "The Treatment of Anemia." All physicians are cordially welcome.

The usual luncheon will be served.

THE CLINICAL CONFERENCE OF THE NEW ENGLAND HOSPITAL FOR WOMEN AND CHILDREN

The monthly clinical conference of the New England Hospital for Women and Children will be held at the hospital, Dimock Street, Roxbury, on Thursday, Jan. 30, at 8 p. m. Subject: Problems in modern epileptic research; case reports and discussion. Please note temporary change from third to fifth Thursday.

ALICE H. BIGELOW, M.D., *Secretary.*

BOSTON MEDICAL HISTORY CLUB

Boston Medical Library, 8 The Fenway, Monday evening, January 20, 1930, at 8:15 o'clock.

A few of the portraits and other pictures in the Boston Medical Library. Illustrated with stereopticon. George H. Monks, M.D.

A frontier doctor. Mr. Bernard De Voto.

Readings from unusual books. James F. Ballard.

JAMES F. BALLARD, *Secretary.*

BERKSHIRE COUNTY MEDICAL SOCIETY

The next meeting of the Berkshire District Medical Society will be held January 30 at St. Luke's Hospital, Pittsfield, with a dinner at six o'clock. We will have as guest speaker, Dr. Robert B. Greenough

of Boston. His subject will be: "The Relation of the General Practitioner to the Cancer Problem."

HUGH DOWNEY, *Secretary.*

CLINIC AT THE BOSTON CITY HOSPITAL

A clinic will be held at the Boston City Hospital, Saturday, January 25, 11.00 A. M. to 12.30 P. M.

GYNECOLOGICAL AND OBSTETRICAL SERVICE

Dr. John T. Williams, Pyelitis of Pregnancy. (Lantern Slides.)

Dr. Reginald D. Margeson, Transverse Cervical Caesarean Section.

MEDICAL SERVICE

Dr. Cadis Phipps, Angina Pectoris.

Dr. Thomas J. O'Brien, Lung Abscess.

Dr. Joseph M. Lynch, Carcinoma of the Lung.

SURGICAL SERVICE

Clinical Demonstrations by Dr. David D. Scannel, Dr. Somers Fraser and Dr. Edwin Harding.

SOCIETY MEETINGS, CONGRESSES AND CONFERENCES

1929-1930—Massachusetts Dietetic Association. Complete schedule appears on page 852, issue of October 24.

January 16—New England Women's Medical Society. Detailed notice appears on page 148.

January 16—The New England Heart Association. Detailed notice appears on page 55, issue of January 2.

January 20—Boston Medical History Club. Complete notice appears on page 148.

January 21—The South End Neighborhood Medical Club. Complete notice appears on page 148.

January 25—Clinic at the Boston City Hospital. Detailed notice appears above.

January 30—The Clinical Conference of the New England Hospital for Women and Children. Complete notice appears on page 148.

February 3—American Heart Association. Complete notice appears on page 1181, issue of December 5.

February 10-14—American College of Physicians. Complete notice appears on page 853, issue of October 24.

March-October—International Medical Postgraduate Courses in Berlin. Complete notice appears on page 853, issue of October 24.

April 14-18—The New England Public Health Institute. Complete notice appears on page 55, issue of January 2.

May 2—Annual Meeting of the American Society of Stomatologists. Detailed notice appears on page 92, issue of January 9.

May 5-10—First International Congress on Mental Hygiene. Detailed notice appears on page 93.

September 4-8—Fifth International Congress on Physiotherapy. Complete notice appears on page 906, issue of October 31.

October 27—The American Public Health Association. Detailed notice appears on page 1271, issue of December 19.

DISTRICT MEDICAL SOCIETIES

Berkshire District Medical Society

January 30—Complete notice for this meeting appears on page 148.

Essex North District Medical Society

May 1—Thursday—Censors' meeting at Hotel Bartlett, 95 Main Street, Haverhill, (Telephone 3430) at 2 P. M. sharp. Candidates should present their diplomas to the Secretary one week in advance.

May 7—Wednesday—Annual Meeting.

J. FORREST BURNHAM, Secretary.

Essex South District Medical Society

Wednesday, February 5, 1930—Council Meeting, Boston.

Wednesday, February 12, 1930—Danvers State Hospital, Hathorne. Clinic 5 P. M. Dinner 7 P. M. Speakers: Dr. Winfred Overholser. Subject: "Criminology and Psychiatry." Mr. Clark, District Attorney for Essex County, who will speak on the legal aspect.

Wednesday, March 5, 1930—Lynn Hospital. Clinic 5 P. M. Dinner 7 P. M. Speaker: Dr. R. S. Titus, Boston. Subject: "Some Aspects of Caesarean Section," illustrated with Moving Pictures. General Discussion from the floor.

Wednesday, April 2, 1930—Hotel Hawthorne, Salem. Dinner at 7 P. M. Speaker: Dr. Timothy Leary, Boston. Subject: "Diagnostic and Therapeutic Pitfalls in Intracranial Pyogenic Infections."

Thursday, May 1, 1930—Censors meet for Examination of Candidates at Salem Hospital at 3:30 P. M.

Tuesday, May 13, 1930—Annual Meeting. The Tavern, Gloucester. Speaker: Dr. C. Macfie Campbell, Director of Boston Psychopathic Hospital. Subject to be announced later. Ladies invited. Dancing.

R. E. STONE, M.D., Secretary.

Franklin District Medical Society

The meetings of the Franklin District Medical Society will be held at the Weldon Hotel, Greenfield, Mass., on the second Tuesdays of March and May, at 11 A. M.

CHARLES MOLINE, Secretary.

Hampshire District Medical Society

Meetings of Hampshire District will occur at 11 A. M. the second Wednesdays of February and April and will be held at the Dickinson Hospital, Northampton. The annual meeting will be held in May.

LUTHER O. WHITMAN, M.D., Secretary.

Middlesex East District Medical Society

March 12—At Melrose.

May 13—At Unicorn Country Club, Stoneham.

ALLAN R. CUNNINGHAM, Secretary.

Middlesex South District Medical Society

April 16, 1930—Annual Meeting. Commander Hotel, Cambridge. Program to be announced.

May, 1930—Censors' meeting.

ALEXANDER A. LEVI, Secretary.

Norfolk District Medical Society

January 27, 1930—Roxbury Masonic Temple. "Recent Advances in Diagnosis and Treatment of Syphilis." The speakers will be Drs. C. Morton Smith and Austin W Cheever.

February 24, 1930—Roxbury Masonic Temple, 8:00. Dr. Edwin H. Place has been invited to read a paper and has been given carte blanche in the selection of his subject.

March 24, 1930—Roxbury Masonic Temple. Dr. Burton E. Hamilton. Subject to be announced.

May 6, 1930—Annual Meeting. Program to be announced.

The Censors meet for the examination of candidates, May 1, 1930, in the Roxbury Masonic Temple, 171 Warren Street, Roxbury, at 4:00 P. M.

Applications must be in the hands of the Secretary at least one week previous to date of examination.

Owing to inability to engage the Roxbury Masonic Apartments on the last Tuesday of the month, such meetings as will be held in the Roxbury Temple will be held Monday evenings as per the dates above.

FRANK S. CRUICKSHANK,
Secretary, Norfolk District Medical Society.

Plymouth District Medical Society

January 16, 1930—Brockton Hospital, 11 A. M. Dinner at the hospital 1 P. M. Program: Puerperal Sepsis. Dr. Charles E. Mongan; Face Presentation, illustrated with moving pictures; Breech Presentation, illustrated with moving pictures. Detailed notice appears on page 92.

March 20, 1930—Moore Hospital, Brockton. Speakers to be announced later.

April 17, 1930—Annual Meeting, Commercial Club, Brockton, 7 P. M. Election of officers. Annual oration, Dr. Frederick F. Weiner, "The Management of Prostatic Diseases," with moving pictures.

G. A. MOORE, M.D., Secretary.

BOOK REVIEWS

A System of Bacteriology, Volume 3. *Economic Bacteriology — Plague — Anaerobes — Food Poisoning.* Medical Research Council, London, His Majesty's Stationery Office, 1929. £1, 15s.

This is the first volume to appear of the new System of Bacteriology sponsored by the British Medical Research Council. It represents the latest if not

the only attempt to produce in English a work at all parallel with the German Kolle-Wassermann; and in view of our decreasing knowledge of German it is well that some English substitute is available.

The volume now at hand comprises sections on the Economic Aspects of Bacteriology; Bacteriology of Water, of Foods and of Soil; Bacteriological Aspects of the Dairy Industry; Bacterial Diseases of Insects and of Plants; Bacillus Pestis; Bacillus Tetani; the Organisms Associated with Gas Gangrene; Bacillus Botulinus; and Food Poisoning. Each section has been largely written by a single individual; but, where it has been deemed advisable, portions have been contributed by others than the chief author.

As is usually true of British publications, the material is presented in an interesting manner. The articles are well written and carefully edited, so that one may read with pleasure as well as profit and not be annoyed by glaring typographical and syntactical errors. The chief fault of the present volume may be suspected from the statement of the publishers that "only those (the conflicting views of the past) have been selected for critical review which have seemed to the authors to have a basis of truth or some important relation to modern work." When, as in the present case, an author is also an authority, he is apt to cherish a prejudice in favor of his own work which results in an undue appreciation of it to the disparagement of other and equally valuable efforts. This results in an unevenness of emphasis which may not be always just, but, when all is said, is perhaps preferable to the encyclopedic length and drabness which results from an attempt to include everything.

While the printing and paper are admirable, it is to be regretted that a more durable binding has not been provided for this valuable book.

Le Traitement de la Paralysie Générale et du Tabès par la Malaria Provoquée. Par A. Fribourg-Blanc Paris: Masson et Cie, 1929. 120 pages. Price, 15 francs.

Treatment of paresis by malaria therapy, a method inaugurated on a large scale by Wagner von Jauregg in 1917, has been repeatedly reported as equally successful in other hands. Gerstmann has been able to report, from Wagner von Jauregg's clinic, on over 2000 cases, treated over a period of more than ten years. Between 30 and 40% of the patients have complete and permanent remissions and 5 to 15% have temporary remissions followed by relapses. Complete remissions were practically unknown before the advent of this type of treatment; during the last ten years treatment with tryparsamide caused some complete remissions, although the percentage of cures is less than with malaria.

Fribourg-Blanc has treated 27 cases of paresis in the Val-de Grâce Hospital, Paris, since 1925 with complete remissions in about 40%, a record comparable to the figures from the Vienna clinic of Wagner von Jauregg. The results in tabès were not so good. His report is brief, clear, concise and contains a number of excellent case histories. This confirmation of Wagner von Jauregg's methods is timely and valuable.

The Ear, Nose and Throat in General Practice. By D. A. Crow, M.D., Ch.B. (Edin.), Otolaryngologist, the Royal Sussex County Hospital, Brighton; The Sussex Throat and Ear Hospital. Pp. 150 with illustrations. Oxford Medical Publications. Oxford University Press. Price $3.50.

This work is, as the author states, an attempt to define the opportunities, responsibilities and limitations of the general practitioner dealing with diseases of the ear, nose and throat in daily practice. It is well written; and, much of the advice given is sound. Chapter II dealing with "The Acute Ear" and Chapter IV on "Deafness" are particularly good. American otolaryngologists do not, as a rule, use 10% cocaine solution as promiscuously as is advised, nor will they agree that to save hearing (page 46) the mastoid antrum should be opened, "if, in 10 days from the onset of an acute otitis, there is no evident diminution of the ear discharge." The eleven pages devoted to the technic of tonsillectomy, in a work of this character, might have been omitted or used to better advantage.

Laboratory Methods of the United States Army. Edited by Charles F. Craig, M.A., M.D., Colonel, Medical Corps United States Army. Approved by the Surgeon-General of the Army. Illustrated. Lea and Febiger, Philadelphia, 1929. Pp. 696. Price $3.50.

This army laboratory manual is divided into twelve sections, taking up every conceivable subject which the army bacteriologist, pathologist, and chemist has to deal with. The volume is, of course valuable to the civilian physician who has to deal with these subjects, either as a specialist, or in connection with general medicine.

It is hard to pick out special sections for praise, as the general context of the book is of such worth, from the first section on the examination of the urine, with all the modern chemical methods now in use, through the last section on, "Veterinary Laboratory Methods."

The section on the examination of the blood, blood grouping and selection of donors for transfusion, is particularly full and interesting.

In section three, "Special Bacteriological Methods," much attention is paid to "brucella melitensis, var abortus," of which so much is being written at the present time.

The sections on "Hypersensitiveness" and on "The Necropsy" are most thorough and informing.

Apart from the scientific excellence of this little volume, its size and flexibility make the reader feel that he has a good book in his hand, it "feels right," excellent in text and in make up.

Such a laboratory *vade mecum* must find many resting places for constant and instructive use, outside of the army hospitals and stations.